



FYI-0803-01455

MR 269098

DEPARTMENT OF HEALTH & HUMAN SERVICES

Public Health Service

National Institutes of Health
National Institute of
Environmental Health Sciences
P. O. Box 12233
Research Triangle Park, NC 27709

August 21, 2003

Document Control Office (7407)
Attn: TSCA Section 8(e) Or (FYI)
Room G99 East Tower
Ofc. Of Pollution Prevention & Toxics
401 M St SW
Washington, DC 20460-0001

Contain NO CBI

08 AUG 25 11:11:12
RECEIVED
OPPT NCIC

Dear Document Control Office (7407):

In compliance with the National Toxicology Program's (NTP) mission to keep our colleagues informed of the current NTP findings during ongoing studies, a copy of the Pathology Working Group (PWG) report and the Summary Pathology Tables for the chronic Dosed Feed study on BENZOPHENONE (119-61-9) are enclosed for your review.

The NTP assembles a Pathology Working Group to review every study and to resolve any differences between the study laboratory and quality assessment pathology evaluations. Please note that the PWG conclusion of the study results is based solely on the pathology for this study and may not reflect final NTP conclusions. In determining final conclusions, the NTP assesses a broad array of information that includes other results from this study and historical control data.

The Summary Pathology Tables contain the Incidence Rates of Neoplastic and Non-neoplastic Lesion data and the Statistical Analysis of Primary Tumors data pertaining to the laboratory animals. All study data are subject to an NTP retrospective audit and the interpretation may be modified based on the findings.

A wide variety of NTP information is also available in electronic format on the world-wide web, for example, the NTP Annual Plan, abstracts of NTP Reports, study data, and the status of all NTP studies. To view this information requires access to the internet and a Web browser such as Netscape Navigator or Internet Explorer. To access the NTP home page, use the URL <http://ntp-server.niehs.nih.gov/>. Comments on the usefulness of this site and suggestions for improvement are encouraged.

Please contact Central Data Management (CDM) at (919)541-3419 if you have any questions. You may also fax your requests for information to CDM at (919)541-3687 or send them via e-mail to cdm@niehs.nih.gov.



269098
2003 SEP -9 AM 8:48
RECEIVED
OPPT NCIC



Hard copies of documents such as NTP Technical Reports, short-term Toxicity Reports, and the Report on Carcinogens are available from the Environmental Health Information Service (EHIS). You can contact EHIS by phone at (919) 541-3841, by fax at (919)541-0273, or by e-mail at ehis@niehs.nih.gov.

Sincerely,

A handwritten signature in cursive script that reads "William C. Eastin".

William Eastin, Ph.D.
Head, Information Systems & Central Files
Environmental Toxicology Program

Encls: PWG Report and Pathology Summary Tables for R2M3
cc: Central Data Management

NATIONAL TOXICOLOGY PROGRAM

TR-533 Benzophenone

Pathology Tables - Rats

- * P03 - Incidence Rates of Non-Neoplastic Lesions
- * P05 - Incidence Rates of Neoplasms by Anatomic Site (systemic lesions abridged)
- * P08 - Statistical Analysis of Primary Tumors
- * P18 - Incidence Rates of Non-Neoplastic Lesions

Pathology Tables - Mice

- * P03 - Incidence Rates of Non-Neoplastic Lesions
- * P05 - Incidence Rates of Neoplasms by Anatomic Site (systemic lesions abridged)
- * P08 - Statistical Analysis of Primary Tumors
- * P18 - Incidence Rates of Non-Neoplastic Lesions

NTP Experiment-Test: 88138-03
Study Type: CHRONIC
Route: DOSED FEED

INCIDENCE RATES OF NONNEOPLASTIC LESIONS BY ANATOMIC SITE (a)
BENZOPHENONE

Report: PEIRPT03
Date: 07/21/03
Time: 15:17:01

FINAL #1 RATS

Facility: Battelle Columbus Laboratory
Chemical CAS #: 119-61-9
Lock Date: 04/26/02
Cage Range: All
Reasons For Removal: All
Removal Date Range: All
Treatment Groups: Include All

a Number of animals examined microscopically at site and number of animals with lesion

NTP Experiment-Test: 88138-03
 Study Type: CHRONIC
 Route: DOSED FEED

INCIDENCE RATES OF NONNEOPLASTIC LESIONS BY ANATOMIC SITE (a)
 BENZOPHENONE

Report: PEIRPT03
 Date: 07/21/03
 Time: 15:17:01

FISCHER 344 RATS FEMALE 0 PPM 312 PPM 625 PPM 1250 PPM

DISPOSITION SUMMARY

Disposition	0 PPM	312 PPM	625 PPM	1250 PPM
Animals Initially In Study	50	50	50	50
Early Deaths	16	10	9	13
Moribund Sacrifice	2	2	4	3
Natural Death				
Survivors	32	38	37	34
Terminal Sacrifice				
Animals Examined Microscopically	50	50	50	50

ALIMENTARY SYSTEM

Esophagus	(50)	(50)	(50)	(50)
Inflammation		1 (2%)		
Periesophageal Tissue, Necrosis, Fatty		1 (2%)		
Intestine Large, Colon	(50)	(50)	(50)	(50)
Inflammation				
Metaplasia, Mucous	1 (2%)			
Parasite Metazoan	1 (2%)			
Intestine Large, Rectum	(50)	3 (6%)	2 (4%)	3 (6%)
Parasite Metazoan	8 (16%)	8 (16%)	14 (28%)	6 (12%)
Ulcer		1 (2%)		
Intestine Large, Cecum	(50)	1 (2%)	(50)	(50)
Inflammation				
Mineralization			1 (2%)	
Intestine Small, Duodenum	(50)	(50)	(50)	(50)
Hyperplasia				
Intestine Small, Jejunum	(50)	(50)	(50)	(50)
Inflammation				
Liver				
Angiectasis	(50)	(50)	(50)	(50)
Basophilic Focus	2 (4%)	2 (4%)	5 (10%)	1 (2%)
Clear Cell Focus	48 (96%)	48 (96%)	41 (82%)	43 (86%)
Degeneration, Cystic	15 (30%)	13 (26%)	10 (20%)	10 (20%)
Eosinophilic Focus	1 (2%)		3 (6%)	4 (8%)
Fatty Change, Diffuse	11 (22%)	6 (12%)	6 (12%)	9 (18%)
Fibrosis		8 (16%)	9 (18%)	20 (40%)
Hematopoietic Cell Proliferation	1 (2%)	6 (12%)	4 (8%)	1 (2%)
Hepatodysplastic Nodule	5 (10%)	6 (12%)	6 (12%)	2 (4%)
Inflammation, Chronic Active	46 (92%)	38 (76%)	29 (58%)	30 (60%)
Mixed Cell Focus	10 (20%)	11 (22%)	5 (10%)	5 (10%)
Necrosis	12 (24%)	6 (12%)	11 (22%)	12 (24%)

a Number of animals examined microscopically at site and number of animals with lesion

NTP Experiment-Test: 88138-03
 Study Type: CHRONIC
 Route: DOSED FEED

INCIDENCE RATES OF NONNEOPLASTIC LESIONS BY ANATOMIC SITE (a)
 BENZOPHENONE

Report: PEIRPT03
 Date: 07/21/03
 Time: 15:17:01

FISCHER 344 RATS FEMALE

0 PPM

312 PPM

625 PPM

1250 PPM

ALIMENTARY SYSTEM - CONT

Bile Duct, Cyst	10 (20%)	35 (70%)	39 (78%)	1 (2%)
Bile Duct, Hyperplasia		27 (54%)	30 (60%)	40 (80%)
Hepatocyte, Centrilobular, Hypertrophy				33 (66%)
Oval Cell, Hyperplasia				3 (6%)
Mesentery	(12)	(18)	(10)	(6)
Fat, Necrosis	11 (92%)	18 (100%)	10 (100%)	4 (67%)
Oral Mucosa	(4)	(8)	(4)	(4)
Hyperplasia, Squamous				1 (25%)
Gingival, Inflammation	4 (100%)	7 (88%)	4 (100%)	4 (100%)
Pancreas	(50)	(50)	(50)	(50)
Basophilic Focus	12 (24%)	3 (6%)	1 (2%)	1 (2%)
Inflammation	17 (34%)	10 (20%)	11 (22%)	6 (12%)
Acinus, Atrophy	(50)	(50)	(50)	12 (24%)
Salivary Glands				(50)
Atrophy	2 (4%)	1 (2%)	1 (2%)	1 (2%)
Basophilic Focus	1 (2%)	1 (2%)	1 (2%)	1 (2%)
Inflammation	(50)	(50)	(50)	(50)
Stomach, Forestomach	2 (4%)	2 (4%)	2 (4%)	4 (8%)
Hyperplasia, Squamous	4 (8%)	2 (4%)	2 (4%)	3 (6%)
Inflammation				2 (4%)
Ulcer	(50)	(50)	(50)	(50)
Stomach, Glandular				1 (2%)
Erosion				1 (2%)
Inflammation				2 (4%)
Mineralization				2 (4%)
Ulcer	1 (2%)	2 (4%)	1 (2%)	1 (2%)
Epithelium, Atrophy				1 (2%)
Tooth				(3)
Inflammation				3 (100%)

CARDIOVASCULAR SYSTEM

Blood Vessel	(50)	(50)	(50)	(50)
Mineralization	(50)	(50)	(50)	(50)
Heart	46 (92%)	46 (92%)	48 (96%)	46 (92%)
Cardiomyopathy				46 (92%)
Atrium, Thrombosis		1 (2%)		1 (2%)

ENDOCRINE SYSTEM

Adrenal Cortex	(50)	(50)	(50)	(50)
----------------	------	------	------	------

a Number of animals examined microscopically at site and number of animals with lesion

NTP Experiment-Test: 88138-03
 Study Type: CHRONIC
 Route: DOSED FEED

INCIDENCE RATES OF NONNEOPLASTIC LESIONS BY ANATOMIC SITE (a)
 BENZOPHENONE

Report: PEIRPT03
 Date: 07/21/03
 Time: 15:17:01

FISCHER 344 RATS FEMALE 0 PPM 312 PPM 625 PPM 1250 PPM

ENDOCRINE SYSTEM - CONT	0 PPM	312 PPM	625 PPM	1250 PPM
Angiectasis	42 (84%)	36 (72%)	18 (36%)	24 (48%)
Atrophy	1 (2%)	2 (4%)	2 (4%)	1 (2%)
Degeneration, Cystic	3 (6%)	1 (2%)	2 (4%)	2 (4%)
Hematopoietic Cell Proliferation	3 (6%)	10 (20%)	6 (12%)	6 (12%)
Hyperplasia	6 (12%)	5 (10%)	5 (10%)	8 (16%)
Hypertrophy	7 (14%)	7 (14%)	5 (10%)	2 (4%)
Karyomegaly	1 (2%)	1 (2%)	1 (2%)	2 (4%)
Necrosis	5 (10%)	16 (32%)	15 (30%)	20 (40%)
Vacuolization Cytoplasmic	14 (28%)	1 (2%)	2 (4%)	(50)
Adrenal Medulla	(50)	(50)	(50)	(50)
Hyperplasia	2 (4%)	1 (2%)	(44)	(48)
Necrosis	1 (2%)	1 (2%)	(50)	1 (2%)
Vacuolization Cytoplasmic	(47)	(48)	(44)	(48)
Parathyroid Gland	(50)	(50)	(50)	(50)
Hyperplasia	30 (60%)	30 (60%)	23 (46%)	23 (46%)
Pituitary Gland	2 (4%)	1 (2%)	1 (2%)	2 (4%)
Angiectasis	23 (46%)	24 (48%)	20 (40%)	18 (36%)
Cyst	1 (2%)	(50)	(50)	(50)
Hyperplasia	(50)	(50)	(50)	(50)
Inflammation	34 (68%)	11 (22%)	13 (26%)	8 (16%)
Thyroid Gland	1 (2%)	2 (4%)	1 (2%)	1 (2%)
C-Cell, Hyperplasia	(50)	(50)	(50)	(50)
Follicle, Cyst	(50)	(50)	(50)	(50)
Follicle, Hyperplasia	(50)	(50)	(50)	(50)
Follicular Cell, Hyperplasia	(50)	(50)	(50)	(50)

GENERAL BODY SYSTEM

None

GENITAL SYSTEM

Clitoral Gland	(50)	(50)	(50)	(50)
Atrophy	3 (6%)	2 (4%)	1 (2%)	(50)
Cyst	6 (12%)	1 (2%)	2 (4%)	(50)
Hyperplasia	2 (4%)	2 (4%)	2 (4%)	1 (2%)
Hyperplasia, Squamous	1 (2%)	(50)	(50)	(50)
Inflammation	6 (12%)	13 (26%)	10 (20%)	9 (18%)
Metaplasia, Squamous	(50)	(50)	(50)	(50)
Ovary	(50)	(50)	(50)	(50)
Cyst	6 (12%)	13 (26%)	10 (20%)	9 (18%)

a Number of animals examined microscopically at site and number of animals with lesion

NTP Experiment-Test: 88138-03
 Study Type: CHRONIC
 Route: DOSED FEED

INCIDENCE RATES OF NONNEOPLASTIC LESIONS BY ANATOMIC SITE (a)
 BENZOPHENONE

Report: PEIRPT03
 Date: 07/21/03
 Time: 15:17:01

FISCHER 344 RATS FEMALE 0 PPM 312 PPM 625 PPM 1250 PPM

GENITAL SYSTEM - CONT				
uterus		(50)	1 (2%)	(50)
Interstitial Cell, Hyperplasia		(50)	(50)	(50)
Angiectasis, Focal				
Inflammation				
Cervix, Hypertrophy				
Endometrium, Hyperplasia, Cystic	12 (24%)	20 (40%)	20 (40%)	20 (40%)
Endometrium, Hyperplasia, Adenomatous	1 (2%)	1 (2%)	1 (2%)	1 (2%)
Serosa, Inflammation, Granulomatous		2 (4%)	2 (4%)	2 (4%)
Vagina				
Inflammation		(1)	(1)	(1)
				1 (100%)

HEMATOPOIETIC SYSTEM

Bone Marrow	(50)	(50)	(50)	(50)
Inflammation, Granulomatous	1 (2%)	1 (2%)	1 (2%)	1 (2%)
Myelofibrosis	2 (4%)		2 (4%)	6 (12%)
Necrosis				1 (2%)
Erythroid Cell, Hyperplasia	8 (16%)	6 (12%)	7 (14%)	2 (4%)
Myeloid Cell, Hyperplasia	11 (22%)	13 (26%)	20 (40%)	13 (26%)
Lymph Node	(8)	(8)	(11)	(12)
Axillary, Right, Ectasia			1 (9%)	
Axillary, Right, Infiltration Cellular, Plasma Cell			1 (9%)	
Deep Cervical, Ectasia	1 (13%)			
Deep Cervical, Hemorrhage	1 (13%)			
Deep Cervical, Infiltration Cellular, Plasma Cell	3 (38%)			2 (17%)
Deep Cervical, Infiltration Cellular, Histiocyte	3 (38%)			
Mediastinal, Hemorrhage				2 (17%)
Mediastinal, Infiltration Cellular, Plasma Cell	2 (25%)	1 (13%)	4 (36%)	2 (17%)
Mediastinal, Infiltration Cellular, Histiocyte				2 (17%)
Pancreatic, Hemorrhage				1 (8%)
Pancreatic, Infiltration Cellular, Histiocyte		2 (25%)	1 (9%)	1 (8%)
Pancreatic, Pigmentation, Hemosiderin		3 (38%)		1 (8%)
Renal, Infiltration Cellular, Histiocyte		2 (25%)		1 (8%)
Renal, Pigmentation		1 (13%)		1 (8%)
Lymph Node, Mesenteric	(50)	(50)	(50)	(50)
Infiltration Cellular, Plasma Cell		1 (2%)	1 (2%)	2 (4%)
Infiltration Cellular, Histiocyte	50 (100%)	49 (98%)	48 (96%)	49 (98%)

a Number of animals examined microscopically at site and number of animals with lesion

NTP Experiment Test: 88138-03
 Study Type: CHRONIC
 Route: DOSED FEED

INCIDENCE RATES OF NONNEOPLASTIC LESIONS BY ANATOMIC SITE (a)
 BENZOPHENONE

Report: PEIRPT03
 Date: 07/21/03
 Time: 15:17:01

FISCHER 344 RATS FEMALE

0 PPM

312 PPM

625 PPM

1250 PPM

HEMATOPOIETIC SYSTEM - CONT

Spleen	(49)	(50)	(50)	(50)	(50)
Accessory Spleen				1 (2%)	1 (2%)
Autolysis				2 (4%)	
Fibrosis	1 (2%)				1 (2%)
Hematopoietic Cell Proliferation	47 (96%)	45 (90%)	40 (80%)	45 (90%)	45 (90%)
Hyperplasia, Lymphoid		1 (2%)	1 (2%)		2 (4%)
Infarct	1 (2%)				
Inflammation, Granulomatous	1 (2%)	1 (2%)			
Pigmentation, Hemosiderin	48 (98%)	50 (100%)	49 (98%)		49 (98%)
Lymphoid Follicle, Atrophy		5 (10%)			
Red Pulp, Hyperplasia					
Thymus	(50)	(49)	(46)		1 (2%)
Atrophy	49 (98%)	48 (98%)	44 (96%)		(50)
Cyst					49 (98%)
					1 (2%)

INTEGUMENTARY SYSTEM

Mammary Gland	(50)	(50)	(50)	(50)	(50)
Atrophy					1 (2%)
Galactoceles	7 (14%)	3 (6%)	2 (4%)		2 (4%)
Hyperplasia	3 (6%)	4 (8%)	1 (2%)		1 (2%)
Inflammation	1 (2%)	1 (2%)	1 (2%)		1 (2%)
Skin	(50)	(50)	(50)	(50)	(50)
Cyst Epithelial Inclusion					1 (2%)
Sebaceous Gland, Hyperplasia					1 (2%)
Subcutaneous Tissue, Necrosis					1 (2%)

MUSCULOSKELETAL SYSTEM

Bone	(50)	(50)	(50)	(50)	(50)
Fibrous Osteodystrophy					2 (4%)
Skeletal Muscle	(1)	(1)	(3)		(1)
Inflammation	1 (100%)	1 (100%)			

NERVOUS SYSTEM

Brain	(50)	(50)	(50)	(50)	(50)
Gliosis					1 (2%)
Hemorrhage	2 (4%)	1 (2%)			2 (4%)
Hydrocephalus	1 (2%)				

a Number of animals examined microscopically at site and number of animals with lesion

NTP Experiment-Test: 88138-03
 Study Type: CHRONIC
 Route: DOSED FEED

INCIDENCE RATES OF NONNEOPLASTIC LESIONS BY ANATOMIC SITE (a)
 BENZOPHENONE

Report: PEIRPT03
 Date: 07/21/03
 Time: 15:17:01

FISCHER 344 RATS FEMALE

0 PPM

312 PPM

625 PPM

1250 PPM

NERVOUS SYSTEM - CONT

Lesion	0 PPM	312 PPM	625 PPM	1250 PPM
Inflammation	1 (2%)	1 (2%)	1 (2%)	1 (2%)
Mineralization	1 (2%)		1 (2%)	1 (2%)
Necrosis				

RESPIRATORY SYSTEM

Lesion	0 PPM	312 PPM	625 PPM	1250 PPM
Lung				
Inflammation, Acute	(50)	(50)	(50)	(50)
Inflammation, Granulomatous	12 (24%)	2 (4%)	1 (2%)	7 (14%)
Metaplasia, Squamous		5 (10%)	9 (18%)	
Alveolar Epithelium, Hyperplasia	18 (36%)	18 (36%)	13 (26%)	15 (30%)
Alveolus, Infiltration Cellular, Histocyte	50 (100%)	50 (100%)	50 (100%)	50 (100%)
Interstitialium, Fibrosis		1 (2%)	1 (2%)	
Nose				
Inflammation	(50)	(50)	(50)	(50)
Thrombosis	2 (4%)	1 (2%)	3 (6%)	1 (2%)
Trachea				
Inflammation	(50)	(50)	(50)	(50)
		4 (8%)	2 (4%)	1 (2%)

SPECIAL SENSES SYSTEM

Lesion	0 PPM	312 PPM	625 PPM	1250 PPM
Eye				
Inflammation	(50)	(50)	(50)	(50)
Lens, Cataract	1 (2%)	1 (2%)	2 (4%)	1 (2%)
Optic Nerve, Fibrosis	1 (2%)	1 (2%)	2 (4%)	2 (4%)
Retina, Degeneration				
Retina, Dysplasia	2 (4%)	2 (4%)	4 (8%)	4 (8%)
Harderian Gland				
Infiltration Cellular, Lymphoid	(50)	(50)	(50)	(50)
	14 (28%)	10 (20%)	6 (12%)	9 (18%)

URINARY SYSTEM

Lesion	0 PPM	312 PPM	625 PPM	1250 PPM
Kidney				
Accumulation, Hyaline Droplet	(50)	(50)	(50)	(50)
Fibrosis	1 (2%)		2 (4%)	1 (2%)
Infarct				
Inflammation, Chronic Active	1 (2%)	1 (2%)	2 (4%)	1 (2%)
Nephropathy	47 (94%)	49 (98%)	48 (96%)	49 (98%)
Cortex, Inflammation				
Cortex, Mineralization	2 (4%)	1 (2%)	4 (8%)	1 (2%)

a Number of animals examined microscopically at site and number of animals with lesion

NTP Experiment-Test: 88138-03
 Study Type: CHRONIC
 Route: DOSED FEED

INCIDENCE RATES OF NONNEOPLASTIC LESIONS BY ANATOMIC SITE (a)
 BENZOPHENONE

Report: PELRPT03
 Date: 07/21/03
 Time: 15:17:01

FIISCHER 344 RATS FEMALE	0 PPM	312 PPM	625 PPM	1250 PPM
URINARY SYSTEM - CONT				
Medulla, Fibrosis	1 (2%)	49 (98%)	49 (98%)	46 (92%)
Medulla, Mineralization	43 (86%)	2 (4%)	4 (8%)	2 (4%)
Pelvis, Inflammation	1 (2%)	2 (4%)	2 (4%)	4 (8%)
Pelvis, Transitional Epithelium, Hyperplasia	1 (2%)	1 (2%)	1 (2%)	1 (2%)
Renal Tubule, Cyst		1 (2%)	1 (2%)	1 (2%)
Renal Tubule, Hyperplasia		1 (2%)	1 (2%)	1 (2%)
Renal Tubule, Pigmentation		1 (2%)	1 (2%)	1 (2%)
Renal Tubule, Vacuolization		1 (2%)	1 (2%)	1 (2%)
Renal Tubule, Cytoplasmic	(50)	(50)	(50)	(50)
Urinary Bladder	1 (2%)	1 (2%)	1 (2%)	
Hyperplasia		1 (2%)	1 (2%)	
Inflammation		1 (2%)		

a Number of animals examined microscopically at site and number of animals with lesion

NTP Experiment-Test: 88138-03
 Study Type: CHRONIC
 Route: DOSED FEED

INCIDENCE RATES OF NONNEOPLASTIC LESIONS BY ANATOMIC SITE (a)
 BENZOPHENONE

Report: PEIRPT03
 Date: 07/21/03
 Time: 15:17:01

FISCHER 344 RATS MALE

0 PPM 312 PPM 625 PPM 1250 PPM

DISPOSITION SUMMARY

Animals Initially In Study	50	50	50	50
Early Deaths				
Moribund Sacrifice	25	12	16	44
Natural Death	3	11	3	4
Survivors				
Terminal Sacrifice	22	27	31	2
Animals Examined Microscopically	50	50	50	50

ALIMENTARY SYSTEM

Intestine Large, Colon	(50)	(50)	(50)	(50)
Erosion			1 (2%)	
Inflammation			1 (2%)	
Parasite Metazoan	1 (2%)	1 (2%)	1 (2%)	
Intestine Large, Rectum	(50)	(50)	(50)	(50)
Parasite Metazoan	6 (12%)	8 (12%)	8 (16%)	5 (10%)
Intestine Large, Cecum	(50)	(50)	(50)	(50)
Erosion	1 (2%)		1 (2%)	
Inflammation				1 (2%)
Mineralization				4 (8%)
Ulcer				2 (4%)
Intestine Small, Duodenum	(50)	(50)	(50)	(50)
Peyer's Patch, Hyperplasia, Lymphoid		1 (2%)		
Liver	(50)	(50)	(50)	(50)
Angiectasis				
Basophilic Focus	24 (48%)	25 (50%)	32 (64%)	19 (38%)
Clear Cell Focus	19 (38%)	19 (38%)	18 (36%)	
Congestion	1 (2%)			
Degeneration, Cystic	8 (16%)	11 (22%)	20 (40%)	15 (30%)
Eosinophilic Focus	5 (10%)	14 (28%)	10 (20%)	9 (18%)
Fatty Change, Diffuse	22 (44%)	20 (40%)	22 (44%)	15 (30%)
Hematopoietic Cell Proliferation	4 (8%)	1 (2%)	2 (4%)	4 (8%)
Hepatodiaphragmatic Nodule	2 (4%)	6 (12%)	1 (2%)	1 (2%)
Infarct				1 (2%)
Inflammation, Chronic Active	22 (44%)	21 (42%)	35 (70%)	33 (66%)
Inflammation, Granulomatous	1 (2%)			2 (4%)
Mineralization				1 (2%)
Mixed Cell Focus	9 (18%)	17 (34%)	22 (44%)	4 (8%)
Necrosis	19 (38%)	19 (38%)	9 (18%)	4 (8%)
Bile Duct, Cyst		1 (2%)		14 (28%)

a Number of animals examined microscopically at site and number of animals with lesion

NTP Experiment-Test: 88138-03
 Study Type: CHRONIC
 Route: DOSED FEED

INCIDENCE RATES OF NONNEOPLASTIC LESIONS BY ANATOMIC SITE (a)
 BENZOPHENONE

Report: PEIRPT03
 Date: 07/21/03
 Time: 15:17:01

FISCHER 344 RATS MALE

0 PPM

312 PPM

625 PPM

1250 PPM

ALIMENTARY SYSTEM - CONT	0 PPM	312 PPM	625 PPM	1250 PPM
Bile Duct, Hyperplasia	49 (98%)	46 (92%)	48 (96%)	50 (100%)
Hepatocyte, Multinucleated	1 (2%)		1 (2%)	
Hepatocyte, Centrilobular, Hypertrophy		17 (34%)	31 (62%)	19 (38%)
Hepatocyte, Centrilobular, Necrosis				1 (2%)
Vein, Inflammation				1 (2%)
Mesentery	(9)	(12)	(8)	(4)
Inflammation	1 (11%)		1 (13%)	1 (25%)
Fat, Necrosis	7 (78%)	7 (58%)	7 (88%)	3 (75%)
Oral Mucosa	(8)	(8)	(5)	(7)
Gingival, Hyperplasia			1 (20%)	5 (71%)
Gingival, Inflammation	8 (100%)	6 (75%)	5 (100%)	1 (14%)
Pharyngeal, Inflammation				1 (14%)
Pancreas	(50)	(50)	(50)	(50)
Basophilic Focus		1 (2%)		3 (6%)
Cyst	14 (28%)	16 (32%)	6 (12%)	9 (18%)
Inflammation				1 (2%)
Metaplasia, Hepatocyte	20 (40%)	21 (42%)	22 (44%)	10 (20%)
Acinus, Atrophy	1 (2%)			
Acinus, Hyperplasia	(49)	(50)	(50)	(49)
Salivary Glands				3 (6%)
Atrophy	1 (2%)	1 (2%)	2 (4%)	
Inflammation		2 (4%)		
Stomach, Forestomach	(50)	(49)	(49)	(50)
Autolysis		1 (2%)		
Hyperplasia, Squamous	7 (14%)	4 (8%)	10 (20%)	17 (34%)
Inflammation	8 (16%)	6 (12%)	8 (16%)	12 (24%)
Mineralization		1 (2%)	1 (2%)	3 (6%)
Ulcer	4 (8%)	1 (2%)	8 (16%)	8 (16%)
Stomach, Glandular	(50)	(50)	(49)	(50)
Erosion	5 (10%)	2 (4%)	3 (6%)	3 (6%)
Hyperplasia			1 (2%)	
Inflammation	5 (10%)	5 (10%)	4 (8%)	7 (14%)
Mineralization			5 (10%)	15 (30%)
Ulcer	1 (2%)		1 (2%)	4 (8%)
Tooth	(3)	(5)	(2)	(3)
Inflammation	1 (33%)		1 (50%)	1 (33%)

CARDIOVASCULAR SYSTEM

- Blood Vessel
- Inflammation
- Mineralization

(50)

(50)

(50)

(50)

1 (2%)

1 (2%)

11 (22%)

a Number of animals examined microscopically at site and number of animals with lesion

NTP Experiment-Test: 88138-03
 Study Type: CHRONIC
 Route: DOSED FEED

INCIDENCE RATES OF NONNEOPLASTIC LESIONS BY ANATOMIC SITE (a)
 BENZOPHENONE

Report: PETRPT03
 Date: 07/21/03
 Time: 15:17:01

FISCHER 344 RATS MALE

0 PPM

312 PPM

625 PPM

1250 PPM

CARDIOVASCULAR SYSTEM - CONT					
Pulmonary Artery, Pulmonary Vein, Hypertrophy	(50)	(50)	1 (2%)	(50)	
Heart	48 (96%)	48 (96%)	47 (94%)	49 (98%)	
Cardiomyopathy			2 (4%)	6 (12%)	
Mineralization					
Aorta, Tunica, Media, Mineralization		1 (2%)			
Atrium, Thrombosis	3 (6%)	5 (10%)	2 (4%)	1 (2%)	
Endocardium, Hyperplasia		2 (4%)			
Valve, Thrombosis		1 (2%)			

ENDOCRINE SYSTEM

Adrenal Cortex	(50)	(49)	(50)	(50)	
Angiectasis	4 (8%)	4 (8%)	2 (4%)	1 (2%)	
Atrophy		1 (2%)			
Cytoplasmic Alteration	1 (2%)				
Degeneration, Cystic	1 (2%)				
Hematopoietic Cell Proliferation	5 (10%)		2 (4%)	4 (8%)	
Hyperplasia	1 (2%)	4 (8%)	11 (22%)	3 (6%)	
Hypertrophy	8 (16%)	2 (4%)	3 (6%)	1 (2%)	
Necrosis	1 (2%)	4 (8%)		27 (54%)	
Vacuolization Cytoplasmic	27 (54%)	27 (55%)	31 (62%)	27 (54%)	
Adrenal Medulla	(50)	(49)	(50)	(50)	
Angiectasis	6 (12%)	1 (2%)	11 (22%)	5 (10%)	
Hyperplasia	(50)	8 (16%)	(50)	(50)	
Islets, Pancreatic	1 (2%)	(50)			
Parathyroid Gland	(49)	(45)	(48)	(49)	
Hyperplasia	2 (4%)	1 (2%)	19 (40%)	32 (65%)	
Pituitary Gland	(50)	(50)	(50)	(50)	
Angiectasis	4 (8%)	10 (20%)	11 (22%)	3 (6%)	
Cyst	6 (12%)	3 (6%)	1 (2%)	5 (10%)	
Hyperplasia	16 (32%)	21 (42%)	12 (24%)	13 (26%)	
Inflammation		1 (2%)		1 (2%)	
Pigmentation, Hemosiderin		1 (2%)			
Thyroid Gland	(50)	(50)	(50)	(50)	
Infiltration Cellular, Mononuclear Cell	1 (2%)		2 (4%)	1 (2%)	
Ultimobranchial Cyst	17 (34%)	8 (16%)	8 (16%)	5 (10%)	
C-Cell, Hyperplasia		1 (2%)			
Follicle, Cyst		2 (4%)			
Follicle, Degeneration	1 (2%)	1 (2%)			
Follicular Cell, Hyperplasia		1 (2%)		1 (2%)	

a Number of animals examined microscopically at site and number of animals with lesion

NTP Experiment-Test: 88138-03
 Study Type: CHRONIC
 Route: DOSED FEED

INCIDENCE RATES OF NONNEOPLASTIC LESIONS BY ANATOMIC SITE (a)
 BENZOPHENONE

Report: PEIRPT03
 Date: 07/21/03
 Time: 15:17:01

FISCHER 344 RATS MALE

0 PPM

312 PPM

625 PPM

1250 PPM

GENERAL BODY SYSTEM

None

GENITAL SYSTEM

Epididymis	(50)	(50)	(50)	(50)
Granuloma Sperm	1 (2%)		1 (2%)	2 (4%)
Inflammation	3 (6%)		4 (8%)	1 (2%)
Preputial Gland	(50)	(50)	(50)	(49)
Atrophy			1 (2%)	
Hyperplasia	1 (2%)	1 (2%)	1 (2%)	1 (2%)
Inflammation	2 (4%)	2 (4%)	1 (2%)	1 (2%)
Duct, Cyst				
Prostate	(50)	(50)	(50)	(50)
Atrophy	4 (8%)	7 (14%)	8 (16%)	4 (8%)
Hyperplasia	2 (4%)	3 (6%)	4 (8%)	
Inflammation	18 (36%)	17 (34%)	26 (52%)	26 (52%)
Seminal Vesicle	(50)	(50)	(50)	(49)
Atrophy	3 (6%)	7 (14%)	8 (16%)	4 (8%)
Inflammation	1 (2%)		1 (2%)	1 (2%)
Mineralization				
Testes	(50)	(50)	(50)	(50)
Inflammation		1 (2%)		1 (2%)
Necrosis		2 (4%)		
Germinal Epithelium, Degeneration	6 (12%)	5 (10%)	6 (12%)	7 (14%)
Interstitial Cell, Hyperplasia	15 (30%)	12 (24%)	14 (28%)	22 (44%)

HEMATOPOIETIC SYSTEM

Bone Marrow	(50)	(49)	(50)	(50)
Hyperplasia, Megakaryocyte		1 (2%)		
Inflammation, Granulomatous		1 (2%)	1 (2%)	2 (4%)
Myelofibrosis				
Necrosis		1 (2%)		2 (4%)
Erythroid Cell, Hyperplasia	13 (26%)	3 (6%)	10 (20%)	10 (20%)
Myeloid Cell, Hyperplasia	21 (42%)	27 (55%)	20 (40%)	14 (28%)
Lymph Node	(19)	(20)	(16)	(19)
Deep Cervical, Ectasia	2 (11%)			1 (5%)
Deep Cervical, Infiltration Cellular, Plasma Cell	1 (5%)	2 (10%)		2 (11%)

a Number of animals examined microscopically at site and number of animals with lesion

NTP Experiment-Test: 88138-03
 Study Type: CHRONIC
 Route: DOSED FEED

INCIDENCE RATES OF NONNEOPLASTIC LESIONS BY ANATOMIC SITE (a)
 BENZOPHENONE

Report: PEIRPT03
 Date: 07/21/03
 Time: 15:17:01

FISCHER 344 RATS MALE

0 PPM

312 PPM

625 PPM

1250 PPM

HEMATOPOIETIC SYSTEM - CONT	0 PPM	312 PPM	625 PPM	1250 PPM
Mediastinal, Ectasia	3 (16%)		4 (25%)	3 (16%)
Mediastinal, Hemorrhage	1 (5%)		1 (6%)	2 (11%)
Mediastinal, Hyperplasia			1 (6%)	2 (11%)
Mediastinal, Infiltration Cellular, Plasma Cell		1 (5%)	2 (13%)	3 (16%)
Mediastinal, Infiltration Cellular, Histiocyte	2 (11%)			
Histiocyte			1 (6%)	
Mediastinal, Inflammation			2 (13%)	2 (11%)
Pancreatic, Ectasia			1 (6%)	1 (5%)
Pancreatic, Hemorrhage			2 (13%)	1 (5%)
Pancreatic, Infiltration Cellular, Histiocyte	1 (5%)	1 (5%)	3 (19%)	1 (5%)
Pancreatic, Inflammation				1 (5%)
Renal, Ectasia				1 (5%)
Renal, Infiltration Cellular, Histiocyte	(5)	(1)	(2)	1 (5%)
Lymph Node, Mandibular	1 (20%)			
Ectasia	(50)	(50)	(50)	(50)
Lymph Node, Mesenteric	1 (2%)			6 (12%)
Atrophy	4 (8%)	2 (4%)	5 (10%)	4 (8%)
Ectasia	47 (94%)	41 (82%)	48 (96%)	46 (92%)
Infiltration Cellular, Histiocyte	1 (2%)			
Inflammation	(50)	(50)	(50)	(50)
Spleen				
Accessory Spleen	1 (2%)	1 (2%)	3 (6%)	1 (2%)
Autolysis	45 (90%)	42 (84%)	45 (90%)	41 (82%)
Fibrosis			1 (2%)	1 (2%)
Hematopoietic Cell Proliferation	6 (12%)	2 (4%)	9 (18%)	4 (8%)
Hemorrhage	1 (2%)	3 (6%)	7 (14%)	1 (2%)
Hyperplasia, Lymphoid	1 (2%)	2 (4%)	1 (2%)	1 (2%)
Inflammation, Granulomatous	39 (78%)	43 (86%)	44 (88%)	43 (86%)
Necrosis	1 (2%)		1 (2%)	2 (4%)
Pigmentation, Hemosiderin	1 (2%)	(48)	(48)	(48)
Lymphoid Follicle, Atrophy	(48)	42 (88%)	47 (98%)	46 (96%)
Thymus	44 (92%)	1 (2%)		4 (8%)
Atrophy				
Ectopic Parathyroid Gland				

INTEGUMENTARY SYSTEM

Mammary Gland
 Fibrosis
 Galactocele
 Inflammation

(50)
 1 (2%)
 2 (4%)
 1 (2%)

(48)

(50)

(50)

1 (2%)

a Number of animals examined microscopically at site and number of animals with lesion

NTP Experiment Test: 88138-03
 Study Type: CHRONIC
 Route: DOSED FEED

INCIDENCE RATES OF NONNEOPLASTIC LESIONS BY ANATOMIC SITE (a)
 BENZOPHENONE

Report: PEIRPT03
 Date: 07/21/03
 Time: 15:17:01

FISCHER 344 RATS MALE 0 PPM 312 PPM 625 PPM 1250 PPM

INTEGUMENTARY SYSTEM - CONT				
	0 PPM	312 PPM	625 PPM	1250 PPM
SKIN				
Hyperplasia	(50)	(50)	(50)	(50)
Inflammation	2 (4%)	1 (2%)		
Subcutaneous Tissue, Inflammation		1 (2%)		

MUSCULOSKELETAL SYSTEM				
	0 PPM	312 PPM	625 PPM	1250 PPM
Bone				
Fibrous Osteodystrophy	(50)	(50)	(50)	(50)
Osteosclerosis			1 (2%)	
Skeletal Muscle	(2)	(2)	1 (2%)	
Degeneration	1 (50%)	1 (50%)	1 (100%)	
Inflammation	1 (50%)			4 (8%)

NERVOUS SYSTEM				
	0 PPM	312 PPM	625 PPM	1250 PPM
Brain				
Hemorrhage	(50)	(50)	(50)	(50)
Necrosis	5 (10%)	5 (10%)	2 (4%)	5 (10%)
Peripheral Nerve	2 (4%)	4 (8%)		
Infiltration Cellular, Mononuclear Cell	(1)			
	1 (100%)			

RESPIRATORY SYSTEM				
	0 PPM	312 PPM	625 PPM	1250 PPM
Lung				
Inflammation, Acute	(50)	(49)	(50)	(50)
Inflammation, Granulomatous	2 (4%)	2 (4%)	5 (10%)	7 (14%)
Metaplasia, Squamous	2 (4%)	4 (8%)	5 (10%)	2 (4%)
Mineralization				1 (2%)
Necrosis	1 (2%)		2 (4%)	10 (20%)
Thrombosis		1 (2%)	1 (2%)	
Alveolar Epithelium, Hyperplasia	16 (32%)	5 (10%)	13 (26%)	7 (14%)
Alveolus, Infiltration Cellular, Histocyte	46 (92%)	47 (96%)	49 (98%)	50 (100%)
Bronchiole, Hyperplasia	1 (2%)	3 (6%)		
Interstitial, Fibrosis		2 (4%)		
Nose				
Inflammation	(50)	(50)	(50)	(50)
Thrombosis	7 (14%)	7 (14%)	8 (16%)	9 (18%)
Olfactory Epithelium, Degeneration	1 (2%)	2 (4%)	1 (2%)	
Olfactory Epithelium, Metaplasia	1 (2%)		1 (2%)	

NTP Experiment-Test: 88138-03
 Study Type: CHRONIC
 Route: DOSED FEED

INCIDENCE RATES OF NONNEOPLASTIC LESIONS BY ANATOMIC SITE (a)
 BENZOPHENONE

Report: PEIRPT03
 Date: 07/21/03
 Time: 15:17:01

FISCHER 344 RATS MALE

0 PPM

312 PPM

625 PPM

1250 PPM

RESPIRATORY SYSTEM - CONT
 Respiratory Epithelium, Hyperplasia
 Trachea
 Inflammation

1 (2%)	(50)	1 (2%)	(50)	8 (16%)	(50)
2 (4%)	(50)	1 (2%)	(50)	8 (16%)	(50)
					3 (6%)

SPECIAL SENSES SYSTEM

Eye

Anterior Chamber, Inflammation	(50)	(50)	(50)	(50)
Ciliary Body, Inflammation			1 (2%)	1 (2%)
Cornea, Inflammation			1 (2%)	1 (2%)
Iris, Fibrosis	1 (2%)		1 (2%)	
Iris, Inflammation	1 (2%)		1 (2%)	
Lens, Cataract	2 (4%)			
Lens, Mineralization	1 (2%)		1 (2%)	
Retina, Atrophy	1 (2%)			
Retina, Degeneration	5 (10%)	2 (4%)	5 (10%)	
Harderian Gland	(50)	(50)	(50)	(50)
Hyperplasia	1 (2%)		1 (2%)	1 (2%)
Infiltration Cellular, Lymphoid	9 (18%)	4 (8%)	9 (18%)	3 (6%)

URINARY SYSTEM

Kidney	(50)	(50)	(50)	(50)
Accumulation, Hyaline Droplet	4 (8%)	1 (2%)	4 (8%)	2 (4%)
Hyperplasia, Oncocytic			1 (2%)	
Infarct	1 (2%)	3 (6%)		
Nephropathy	50 (100%)	45 (90%)	50 (100%)	50 (100%)
Artery, Inflammation			1 (2%)	1 (2%)
Cortex, Mineralization			4 (8%)	14 (28%)
Medulla, Mineralization	47 (94%)	49 (98%)	47 (94%)	49 (98%)
Papilla, Transitional Epithelium, Hyperplasia			1 (2%)	1 (2%)
Pelvis, Inflammation	1 (2%)	11 (22%)	1 (2%)	1 (2%)
Pelvis, Transitional Epithelium, Hyperplasia			29 (58%)	34 (68%)
Renal Tubule, Cyst	1 (2%)	5 (10%)	1 (2%)	9 (18%)
Renal Tubule, Hyperplasia	1 (2%)	1 (2%)	20 (40%)	23 (46%)
Renal Tubule, Pigmentation	(50)	(50)	(50)	(50)
Urinary Bladder			1 (2%)	
Calculus Gross Observation	3 (6%)	1 (2%)	1 (2%)	2 (4%)
Inflammation				
Muscularis, Degeneration	1 (2%)		2 (4%)	

a Number of animals examined microscopically at site and number of animals with lesion

NTP
LAB: Battelle Columbus
EXPERIMENT: 88138 TEST: 03
TEST TYPE: CHRONIC
CONT: N01-ES-55388
PATHOLOGIST: MISSING

STATISTICAL ANALYSIS OF PRIMARY TUMORS
BENZOPHENONE
CAGES FROM 0000 TO LAST CAGE
ROUTE: DOSED FEED

REPORT: PEIRPT08
DATE: 07/21/03
TIME: 15:26:14
PAGE: 1
NTP C#: 88138B
CAS: 119-61-9

FINAL #1 RATS

REASONS FOR REMOVAL: ALL

REMOVAL DATE RANGE: ALL

TREATMENT GROUPS: INCLUDE ALL

NTP
LAB: Battelle Columbus
EXPERIMENT: 88138 TEST: 03
TEST TYPE: CHRONIC
CONT: N01-BS-55388
PATHOLOGIST: MISSING
Rats(FISCHER 344)

STATISTICAL ANALYSIS OF PRIMARY TUMORS
BENZOPHENONE

CAGES FROM 0000 TO LAST CAGE
ROUTE: DOSED FEED

REPORT: PEIRPT08
DATE: 07/21/03
TIME: 15:26:14
NTP #: 88138B
CAS: 119-61-9

FOR ALL DOSES THE TUMOR RATES IN THE FOLLOWING TISSUES/ORGANS ARE
BASED ON NUMBER OF TISSUES EXAMINED. IN OTHER TISSUES/ORGANS RATES
ARE BASED ON THE NUMBER OF ANIMALS NECROPSIED.

-
- Adrenal Cortex
- Adrenal Medulla
- Clitoral/Preputial Gland
- Heart
- Islets, Pancreatic
- Kidney
- Liver
- Lung
- Nose
- Ovary
- Pancreas
- Parathyroid Gland
- Pituitary Gland
- Salivary Glands
- Testes
- Thymus
- Thyroid Gland

NTP
LAB: Battelle Columbus
EXPERIMENT: 88138 TEST: 03
TEST TYPE: CHRONIC
CONT: N01-ES-55388
PATHOLOGIST: MISSING

STATISTICAL ANALYSIS OF PRIMARY TUMORS
BENZOPHENONE
CAGES FROM 0000 TO LAST CAGE
ROUTE: DOSED FEED

REPORT: PEIRPT08
DATE: 07/21/03
TIME: 15:26:14
NTP C#: 88138B
CAS: 119-61-9

SUMMARY OF STATISTICALLY SIGNIFICANT (P<=.05) RESULTS
IN THE ANALYSTS OF
BENZOPHENONE

Male Rats

Organ

Morphology

Kidney: Renal Tubule

Adenoma
Carcinoma or Adenoma
Alveolar/Bronchiolar Adenoma
Alveolar/Bronchiolar Carcinoma

Lung

Basal or Sq. Cell Carcinoma, Carcinoma, Basosq. Tumor (M or B), Basal Cell Adenoma, Adenoma, Papilloma, Sq Papilloma, Keratoacanthom
a, Trichoepitheliom

Keratoacanthoma

Squamous Cell Papilloma, Papilloma, Squamous Cell Carcinoma or Keratoacanthoma
Squamous Cell Papilloma, Papilloma, or Keratoacanthoma

Adenoma

Leukemia: Lymphocytic, Monocytic, Mononuclear, or Undifferentiated

Benign Tumors

Malignant Tumors

Female Rats

Organ

Morphology

Lung

Mammary Gland

Alveolar/Bronchiolar Adenoma
Alveolar/Bronchiolar Carcinoma or Alveolar/Bronchiolar Adenoma

Fibroadenoma

Fibroma, Fibroadenoma or Adenoma

Fibroma, Fibroadenoma, Carcinoma, or Adenoma

Fibroma

Fibroma, Fibrosarcoma, Sarcoma, Myxoma, Myxosarcoma, or Fibrous Histiocytoma

Keratoacanthoma

Histiocytic Sarcoma

Leukemia: Lymphocytic, Monocytic, Mononuclear, or Undifferentiated

Benign Tumors

Malignant Tumors

All Organs

=====

=====

Dose	Males				Females			
	0 PPM	312 PPM	625 PPM	1250 PPM	0 PPM	312 PPM	625 PPM	1250 PPM

Clitoral/Preputial Gland
 Carcinoma

TUMOR RATES								
OVERALL (a)	1/50 (2%)	3/50 (6%)	3/50 (6%)	1/49 (2%)	1/50 (2%)	2/50 (4%)	2/50 (4%)	1/50 (2%)
POLY-3 RATE (b)	1/42.08	3/41.64	3/45.29	1/31.91	1/44.14	2/47.49	2/47.30	1/45.76
POLY-3 PERCENT (g)	2.4%	7.2%	6.6%	3.1%	2.3%	4.2%	4.2%	2.2%
TERMINAL (d)	1/22 (5%)	2/27 (7%)	1/31 (3%)	0/2 (0%)	0/32 (0%)	2/38 (5%)	1/37 (3%)	1/34 (3%)
FIRST INCIDENCE	729 (T)	709	543	569	724	729 (T)	709	729 (T)

STATISTICAL TESTS

LIFE TABLE								
LIFE TABLE	P=0.360	P=0.375	P=0.371	P=0.533	P=0.559N	P=0.549	P=0.529	P=0.760N
POLY 3	P=0.529	P=0.301	P=0.332	P=0.696	P=0.544N	P=0.525	P=0.524	P=0.753N
POLY 1.5	P=0.573N	P=0.301	P=0.320	P=0.726	P=0.546N	P=0.518	P=0.517	P=0.754N
POLY 6	P=0.420	P=0.307	P=0.353	P=0.638	P=0.547N	P=0.531	P=0.529	P=0.754N
LOGISTIC REGRESSION	P=0.512N	P=0.335	P=0.278	P=0.779N	P=0.556N	P=0.534	P=0.528	P=0.762
COCH-ARM / FISHERS	P=0.509N	P=0.309	P=0.309	P=0.747	P=0.556N	P=0.500	P=0.500	P=0.753N
ORDER RESTRICTED	P=0.410	(e)	(e)	(e)	P=0.558N	(e)	(e)	(e)

Dose	Males				Females			
	0 PPM	312 PPM	625 PPM	1250 PPM	0 PPM	312 PPM	625 PPM	1250 PPM

Clitoral/Preputial Gland
 Carcinoma or Adenoma

TUMOR RATES								
OVERALL (a)	1/50 (2%)	6/50 (12%)	4/50 (8%)	2/49 (4%)	4/50 (8%)	3/50 (6%)	6/50 (12%)	7/50 (14%)
POLY-3 RATE (b)	1/42.08	6/42.23	4/45.29	2/31.92	4/44.27	3/47.49	6/47.30	7/46.49
POLY-3 PERCENT (g)	2.4%	14.2%	8.8%	6.3%	9.0%	6.3%	12.7%	15.1%
TERMINAL (d)	1/22 (5%)	4/27 (15%)	2/31 (7%)	0/2 (0%)	2/32 (6%)	3/38 (8%)	5/37 (14%)	4/34 (12%)
FIRST INCIDENCE	729 (T)	543	543	569	697	729 (T)	709	624

STATISTICAL TESTS

LIFE TABLE								
LIFE TABLE	P=0.174	P=0.088	P=0.250	P=0.100	P=0.134	P=0.423N	P=0.447	P=0.290
POLY 3	P=0.440	P=0.055	P=0.201	P=0.405	P=0.142	P=0.462N	P=0.412	P=0.290
POLY 1.5	P=0.528	P=0.055	P=0.191	P=0.448	P=0.140	P=0.473N	P=0.400	P=0.283
POLY 6	P=0.322	P=0.058	P=0.220	P=0.335	P=0.141	P=0.455N	P=0.419	P=0.292
LOGISTIC REGRESSION	P=0.579	P=0.057	P=0.165	P=0.381	P=0.136	P=0.449N	P=0.421	P=0.276
COCH-ARM / FISHERS	P=0.530N	P=0.056	P=0.181	P=0.492	P=0.132	P=0.500N	P=0.370	P=0.262
ORDER RESTRICTED	P=0.200	(e)	(e)	(e)	P=0.204	(e)	(e)	(e)

Dose	Males				Females			
	0 PPM	312 PPM	625 PPM	1250 PPM	0 PPM	312 PPM	625 PPM	1250 PPM
Islets, Pancreatic Adenoma								

TUMOR RATES								
OVERALL (a)	1/50 (2%)	0/50 (0%)	1/50 (2%)	1/50 (2%)	0/50 (0%)	0/50 (0%)	2/50 (4%)	1/50 (2%)
POLY-3 RATE (b)	1/42.26	0/41.56	1/44.30	1/32.24	0/44.12	0/47.49	2/47.41	1/45.76
POLY-3 PERCENT (g)	2.4%	0.0%	2.3%	3.1%	0.0%	0.0%	4.2%	2.2%
TERMINAL (d)	0/22 (0%)	0/27 (0%)	1/31 (3%)	0/2 (0%)	0/32 (0%)	0/38 (0%)	0/37 (0%)	1/34 (3%)
FIRST INCIDENCE	680	---	729 (T)	669	---	---	701	729 (T)

STATISTICAL TESTS								
LIFE TABLE								
POLY 3	P=0.281	P=0.500N	P=0.704N	P=0.519	P=0.240	(e)	P=0.257	P=0.512
POLY 1.5	P=0.459	P=0.503N	P=0.750N	P=0.697	P=0.248	(e)	P=0.254	P=0.507
LOGISTIC REGRESSION	P=0.498	P=0.503N	P=0.755N	P=0.729	P=0.249	(e)	P=0.249	P=0.506
COCH-ARM / FISHERS	P=0.418	P=0.501N	P=0.742N	P=0.635	P=0.244	(e)	P=0.257	P=0.506
ORDER RESTRICTED	P=0.463	P=0.500N	P=0.752N	P=0.719	P=0.247	(e)	P=0.240	P=0.512
	P=0.539	P=0.500N	P=0.753N	P=0.753N	P=0.246	(e)	P=0.247	P=0.500
	P=0.451	(e)	(e)	(e)	P=0.182	(e)	(e)	(e)

Dose	Males				Females			
	0 PPM	312 PPM	625 PPM	1250 PPM	0 PPM	312 PPM	625 PPM	1250 PPM
Kidney: Renal Tubule Adenoma								

TUMOR RATES								
OVERALL (a)	1/50 (2%)	1/50 (2%)	2/50 (4%)	4/50 (8%)	0/50 (0%)	0/50 (0%)	2/50 (4%)	1/50 (2%)
POLY-3 RATE (b)	1/42.16	1/41.56	2/44.46	4/33.18	0/44.12	0/47.49	2/47.41	1/45.95
POLY-3 PERCENT (g)	2.4%	2.4%	4.5%	12.1%	0.0%	0.0%	4.2%	2.2%
TERMINAL (d)	0/22 (0%)	1/27 (4%)	1/31 (3%)	0/2 (0%)	0/32 (0%)	0/38 (0%)	0/37 (0%)	0/34 (0%)
FIRST INCIDENCE	709	729 (T)	687	537	---	---	701	679

STATISTICAL TESTS								
LIFE TABLE								
POLY 3	P=0.002 **	P=0.722N	P=0.591	P=0.015 *	P=0.242	(e)	P=0.257	P=0.514
POLY 1.5	P=0.046 *	P=0.758	P=0.519	P=0.114	P=0.250	(e)	P=0.254	P=0.508
LOGISTIC REGRESSION	P=0.056	P=0.758	P=0.510	P=0.143	P=0.250	(e)	P=0.249	P=0.506
COCH-ARM / FISHERS	P=0.036 *	P=0.761	P=0.534	P=0.075	P=0.247	(e)	P=0.257	P=0.508
ORDER RESTRICTED	P=0.047 *	P=0.754N	P=0.526	P=0.142	P=0.239	(e)	P=0.240	P=0.489
	P=0.072	P=0.753N	P=0.500	P=0.181	P=0.246	(e)	P=0.247	P=0.500
	(e)	(e)	(e)	(e)	P=0.182	(e)	(e)	(e)

Dose	Males				Females	
	0 PPM	312 PPM	625 PPM	1250 PPM	0 PPM	312 PPM

Kidney: Renal Tubule Carcinoma or Adenoma

TUMOR RATES	Males				Females	
	0 PPM	312 PPM	625 PPM	1250 PPM	0 PPM	312 PPM
OVERALL (a)	1/50 (2%)	2/50 (4%)	2/50 (4%)	4/50 (8%)	0/50 (0%)	0/50 (0%)
POLY-3 RATE (b)	1/42.16	2/41.56	2/44.46	4/33.18	0/44.12	0/47.49
POLY-3 PERCENT (g)	2.4%	4.8%	4.3%	12.1%	0.0%	0.0%
TERMINAL (d)	0/22 (0%)	2/27 (7%)	1/31 (3%)	0/2 (0%)	0/32 (0%)	0/38 (0%)
FIRST INCIDENCE	709	729 (T)	687	537	---	---
STATISTICAL TESTS						
LIFE TABLE						
POLY 3	P=0.003 **	P=0.563	P=0.591	P=0.015 *	P=0.242	P=0.257
POLY 1.5	P=0.073	P=0.495	P=0.519	P=0.114	P=0.250	P=0.254
LOGISTIC REGRESSION	P=0.090	P=0.495	P=0.510	P=0.143	P=0.250	P=0.249
COCH-ARM / FISHERS	P=0.057	P=0.500	P=0.534	P=0.075	P=0.247	P=0.257
ORDER RESTRICTED	P=0.065	P=0.525	P=0.526	P=0.142	P=0.239	P=0.240
	P=0.113	P=0.500	P=0.500	P=0.181	P=0.246	P=0.247
		(e)	(e)	(e)	P=0.182	(e)
Dose	0 PPM	312 PPM	Males 625 PPM	1250 PPM	0 PPM	312 PPM
			Females 625 PPM	1250 PPM		

Liver Hepatocellular Adenoma

TUMOR RATES	Males				Females	
	0 PPM	312 PPM	625 PPM	1250 PPM	0 PPM	312 PPM
OVERALL (a)	2/50 (4%)	0/50 (0%)	1/50 (2%)	0/50 (0%)	0/50 (0%)	0/50 (0%)
POLY-3 RATE (b)	2/42.28	0/41.56	1/44.30	0/32.01	0/44.12	0/47.49
POLY-3 PERCENT (g)	4.7%	0.0%	2.3%	0.0%	0.0%	0.0%
TERMINAL (d)	1/22 (5%)	0/27 (0%)	1/31 (3%)	0/2 (0%)	0/32 (0%)	0/38 (0%)
FIRST INCIDENCE	676	---	729 (T)	---	---	---
STATISTICAL TESTS						
LIFE TABLE						
POLY 3	P=0.347N	P=0.223N	P=0.409N	P=0.632N	P=0.700	P=0.529
POLY 1.5	P=0.204N	P=0.241N	P=0.484N	P=0.304N	P=0.698	P=0.514
LOGISTIC REGRESSION	P=0.198N	P=0.241N	P=0.491N	P=0.270N	P=0.698	P=0.510
COCH-ARM / FISHERS	P=0.221N	P=0.238N	P=0.470N	P=0.369N	P=0.693	P=0.516
ORDER RESTRICTED	P=0.264N	P=0.239N	P=0.469N	P=0.420N	(e)	P=0.529
	P=0.188N	P=0.247N	P=0.500N	P=0.247N	P=0.694	P=0.500
	P=0.122N	(e)	(e)	(e)	P=0.393	(e)
Dose	0 PPM	312 PPM	Males 625 PPM	1250 PPM	0 PPM	312 PPM
			Females 625 PPM	1250 PPM		

Liver
 Hepatocellular Carcinoma or Hepatocellular Adenoma

Dose	Males				Females			
	0 PPM	312 PPM	625 PPM	1250 PPM	0 PPM	312 PPM	625 PPM	1250 PPM

TUMOR RATES

OVERALL (a)	2/50 (4%)	0/50 (0%)	2/50 (4%)	0/50 (0%)	0/50 (0%)	1/50 (2%)	1/50 (2%)	0/50 (0%)
POLY-3 RATE (b)	2/42.28	0/41.56	2/44.30	0/32.01	0/44.12	1/47.49	1/47.22	0/45.76
POLY-3 PERCENT (g)	4.7%	0.0%	4.5%	0.0%	0.0%	2.1%	2.1%	0.0%
TERMINAL (d)	1/22 (5%)	0/27 (0%)	2/31 (7%)	0/2 (0%)	0/32 (0%)	1/38 (3%)	1/37 (3%)	0/34 (0%)
FIRST INCIDENCE	676	---	729 (T)	---	---	729 (T)	729 (T)	---

STATISTICAL TESTS

LIFE TABLE	P=0.527N	P=0.223N	P=0.589N	P=0.632N	P=0.594N	P=0.534	P=0.529	P=0.529
POLY 3	P=0.306N	P=0.241N	P=0.677N	P=0.304N	P=0.583N	P=0.515	P=0.514	(e)
POLY 1.5	P=0.277N	P=0.241N	P=0.685N	P=0.270N	P=0.585N	P=0.510	P=0.510	(e)
POLY 6	P=0.366N	P=0.238N	P=0.664N	P=0.369N	P=0.584N	P=0.518	P=0.516	(e)
LOGISTIC REGRESSION	P=0.408N	P=0.239N	P=0.653N	P=0.420N	(e)	P=0.534	P=0.529	(e)
COCH-ARM / FISHERS	P=0.248N	P=0.247N	P=0.691N	P=0.247N	P=0.595N	P=0.500	P=0.500	(e)
ORDER RESTRICTED	P=0.171N	(e)	(e)	(e)	P=0.409N	(e)	(e)	(e)

Liver
 Hepatocellular Carcinoma, Hepatocellular Adenoma,
 or Hepatoblastoma

Dose	Males				Females			
	0 PPM	312 PPM	625 PPM	1250 PPM	0 PPM	312 PPM	625 PPM	1250 PPM

TUMOR RATES

OVERALL (a)	2/50 (4%)	0/50 (0%)	2/50 (4%)	0/50 (0%)	0/50 (0%)	1/50 (2%)	1/50 (2%)	0/50 (0%)
POLY-3 RATE (b)	2/42.28	0/41.56	2/44.30	0/32.01	0/44.12	1/47.49	1/47.22	0/45.76
POLY-3 PERCENT (g)	4.7%	0.0%	4.5%	0.0%	0.0%	2.1%	2.1%	0.0%
TERMINAL (d)	1/22 (5%)	0/27 (0%)	2/31 (7%)	0/2 (0%)	0/32 (0%)	1/38 (3%)	1/37 (3%)	0/34 (0%)
FIRST INCIDENCE	676	---	729 (T)	---	---	729 (T)	729 (T)	---

STATISTICAL TESTS

LIFE TABLE	P=0.527N	P=0.223N	P=0.589N	P=0.632N	P=0.594N	P=0.534	P=0.529	(e)
POLY 3	P=0.306N	P=0.241N	P=0.677N	P=0.304N	P=0.583N	P=0.515	P=0.514	(e)
POLY 1.5	P=0.277N	P=0.241N	P=0.685N	P=0.270N	P=0.585N	P=0.510	P=0.510	(e)
POLY 6	P=0.366N	P=0.238N	P=0.664N	P=0.369N	P=0.584N	P=0.518	P=0.516	(e)
LOGISTIC REGRESSION	P=0.408N	P=0.239N	P=0.653N	P=0.420N	(e)	P=0.534	P=0.529	(e)
COCH-ARM / FISHERS	P=0.248N	P=0.247N	P=0.691N	P=0.247N	P=0.595N	P=0.500	P=0.500	(e)
ORDER RESTRICTED	P=0.171N	(e)	(e)	(e)	P=0.409N	(e)	(e)	(e)

Dose	Males			Females		
	0 PPM	312 PPM	1250 PPM	0 PPM	312 PPM	1250 PPM

Lung
 Alveolar/Bronchiolar Adenoma

TUMOR RATES	Males			Females		
	0 PPM	312 PPM	1250 PPM	0 PPM	312 PPM	1250 PPM
OVERALL (a)	4/50 (8%)	1/49 (2%)	0/50 (0%)	4/50 (8%)	0/50 (0%)	1/50 (2%)
POLY-3 RATE (b)	4/42.46	1/41.07	0/32.01	4/44.12	0/47.49	1/47.22
POLY-3 PERCENT (g)	9.4%	2.4%	0.0%	9.1%	0.0%	2.1%
TERMINAL (d)	2/22 (9%)	0/27 (0%)	0/2 (0%)	4/32 (13%)	0/38 (0%)	1/37 (3%)
FIRST INCIDENCE	666	704	---	729 (T)	---	729 (T)
STATISTICAL TESTS						
LIFE TABLE	P=0.033N*	P=0.153N	P=0.038N*	P=0.034N*	P=0.043N*	P=0.137N
POLY 3	P=0.017N*	P=0.188N	P=0.055N	P=0.040N*	P=0.051N	P=0.159N
POLY 1.5	P=0.018N*	P=0.189N	P=0.057N	P=0.039N*	P=0.054N	P=0.165N
POLY 6	P=0.015N*	P=0.182N	P=0.050N	P=0.040N*	P=0.050N	P=0.155N
LOGISTIC REGRESSION	P=0.022N*	P=0.184N	P=0.056N	P=0.034N*	P=0.051N	P=0.137N
COCH-ARM / FISHERS	P=0.019N*	P=0.187N	P=0.059N	P=0.039N*	P=0.059N	P=0.181N
ORDER RESTRICTED	(e)	(e)	(e)	P=0.005N**	(e)	(e)

Dose	Males			Females		
	0 PPM	312 PPM	1250 PPM	0 PPM	312 PPM	1250 PPM

Lung
 Alveolar/Bronchiolar Carcinoma

TUMOR RATES	Males			Females		
	0 PPM	312 PPM	1250 PPM	0 PPM	312 PPM	1250 PPM
OVERALL (a)	0/50 (0%)	0/49 (0%)	1/50 (2%)	0/50 (0%)	0/50 (0%)	0/50 (0%)
POLY-3 RATE (b)	0/42.08	0/40.97	1/44.46	0/44.12	0/47.49	0/47.22
POLY-3 PERCENT (g)	0.0%	0.0%	2.3%	0.0%	0.0%	0.0%
TERMINAL (d)	0/22 (0%)	0/27 (0%)	0/31 (0%)	0/32 (0%)	0/38 (0%)	0/37 (0%)
FIRST INCIDENCE	---	---	687	---	---	---
STATISTICAL TESTS						
LIFE TABLE	P=0.008 **	(e)	P=0.549	P=0.067	(e)	(e)
POLY 3	P=0.048 *	(e)	P=0.511	P=0.184	(e)	(e)
POLY 1.5	P=0.058	(e)	P=0.506	P=0.209	(e)	(e)
POLY 6	P=0.040 *	(e)	P=0.520	P=0.148	(e)	(e)
LOGISTIC REGRESSION	P=0.052	(e)	P=0.500	P=0.154	(e)	(e)
COCH-ARM / FISHERS	P=0.071	(e)	P=0.500	P=0.247	(e)	(e)
ORDER RESTRICTED	P=0.045 *	(e)	(e)	(e)	(e)	(e)

Lung
 Alveolar/Bronchiolar Carcinoma or Alveolar/Bronchiolar Adenoma

TUMOR RATES	Males				Females			
	0 PPM	312 PPM	625 PPM	1250 PPM	0 PPM	312 PPM	625 PPM	1250 PPM
OVERALL (a)	4/50 (8%)	1/49 (2%)	1/50 (2%)	2/50 (4%)	4/50 (8%)	0/50 (0%)	1/50 (2%)	0/50 (0%)
POLY-3 RATE (b)	4/42.46	1/41.07	1/44.46	2/32.43	4/44.12	0/47.49	1/47.22	0/45.76
POLY-3 PERCENT (g)	9.4%	2.4%	2.3%	6.2%	9.1%	0.0%	2.1%	0.0%
TERMINAL (d)	2/22 (9%)	0/27 (0%)	0/31 (0%)	0/2 (0%)	4/32 (13%)	0/38 (0%)	1/37 (3%)	0/34 (0%)
FIRST INCIDENCE	666	704	687	637	729 (T)	---	729 (T)	---

STATISTICAL TESTS

LIFE TABLE

POLY 3	P=0.556	P=0.153N	P=0.117N	P=0.389	P=0.034N*	P=0.043N*	P=0.137N	P=0.055N
POLY 1.5	P=0.332N	P=0.188N	P=0.164N	P=0.467N	P=0.040N*	P=0.051N	P=0.159N	P=0.056N
POLY 6	P=0.326N	P=0.189N	P=0.171N	P=0.402N	P=0.039N*	P=0.054N	P=0.165N	P=0.057N
LOGISTIC REGRESSION	P=0.325N	P=0.182N	P=0.153N	P=0.582N	P=0.040N*	P=0.050N	P=0.155N	P=0.056N
COCH-ARM / FISHERS	P=0.418N	P=0.184N	P=0.167N	P=0.648N	P=0.034N*	(e)	P=0.137N	(e)
ORDER RESTRICTED	P=0.311N	P=0.187N	P=0.181N	P=0.339N	P=0.039N*	P=0.059N	P=0.181N	P=0.059N
	P=0.203N	(e)	(e)	(e)	P=0.005N**	(e)	(e)	(e)

Dose

Dose	Males				Females			
	0 PPM	312 PPM	625 PPM	1250 PPM	0 PPM	312 PPM	625 PPM	1250 PPM
Mammary Gland Adenoma	0 PPM	312 PPM	625 PPM	1250 PPM	0 PPM	312 PPM	625 PPM	1250 PPM

TUMOR RATES	Males				Females			
	0 PPM	312 PPM	625 PPM	1250 PPM	0 PPM	312 PPM	625 PPM	1250 PPM
OVERALL (a)	0/50 (0%)	0/50 (0%)	0/50 (0%)	0/50 (0%)	2/50 (4%)	2/50 (4%)	3/50 (6%)	0/50 (0%)
POLY-3 RATE (b)	0/42.08	0/41.56	0/44.30	0/32.01	2/45.06	2/47.84	3/47.49	0/45.76
POLY-3 PERCENT (g)	0.0%	0.0%	0.0%	0.0%	4.4%	4.2%	6.3%	0.0%
TERMINAL (d)	0/22 (0%)	0/27 (0%)	0/31 (0%)	0/2 (0%)	1/32 (3%)	1/38 (3%)	1/37 (3%)	0/34 (0%)
FIRST INCIDENCE	---	---	---	---	288	633	679	---

STATISTICAL TESTS

LIFE TABLE

POLY 3	(e)	(e)	(e)	(e)	P=0.194N	P=0.653N	P=0.543	P=0.233N
POLY 1.5	(e)	(e)	(e)	(e)	P=0.199N	P=0.672N	P=0.524	P=0.234N
POLY 6	(e)	(e)	(e)	(e)	P=0.198N	P=0.679N	P=0.516	P=0.234N
LOGISTIC REGRESSION	(e)	(e)	(e)	(e)	P=0.203N	P=0.666N	P=0.531	P=0.235N
COCH-ARM / FISHERS	(e)	(e)	(e)	(e)	P=0.292N	P=0.459	P=0.317	P=0.433N
ORDER RESTRICTED	(e)	(e)	(e)	(e)	P=0.199N	P=0.691N	P=0.500	P=0.247N
	(e)	(e)	(e)	(e)	P=0.169N	(e)	(e)	(e)

Dose	Males				Females			
	0 PPM	312 PPM	625 PPM	1250 PPM	0 PPM	312 PPM	625 PPM	1250 PPM

Mammary Gland
 Carcinoma or Adenoma

TUMOR RATES	0 PPM		312 PPM		625 PPM		1250 PPM	
	#	%	#	%	#	%	#	%
OVERALL (a)	0/50 (0%)	0/50 (0%)	0/50 (0%)	0/50 (0%)	2/50 (4%)	3/50 (6%)	3/50 (6%)	0/50 (0%)
POLY-3 RATE (b)	0/42.08	0/41.56	0/44.30	0/32.01	2/45.06	3/47.84	3/47.49	0/45.76
POLY-3 PERCENT (g)	0.0%	0.0%	0.0%	0.0%	4.4%	6.3%	6.3%	0.0%
TERMINAL (d)	0/22 (0%)	0/27 (0%)	0/31 (0%)	0/2 (0%)	1/32 (3%)	2/38 (5%)	1/37 (3%)	0/34 (0%)
FIRST INCIDENCE	---	---	---	---	288	633	679	---
STATISTICAL TESTS								
LIFE TABLE	(e)	(e)	(e)	(e)	P=0.160N	P=0.554	P=0.543	P=0.233N
POLY 3	(e)	(e)	(e)	(e)	P=0.162N	P=0.527	P=0.524	P=0.234N
POLY 1.5	(e)	(e)	(e)	(e)	P=0.162N	P=0.518	P=0.516	P=0.234N
POLY 6	(e)	(e)	(e)	(e)	P=0.165N	P=0.535	P=0.531	P=0.235N
LOGISTIC REGRESSION	(e)	(e)	(e)	(e)	P=0.235N	P=0.285	P=0.317	P=0.433N
COCH-ARM / FISHERS	(e)	(e)	(e)	(e)	P=0.164N	P=0.500	P=0.500	P=0.247N
ORDER RESTRICTED	(e)	(e)	(e)	(e)	P=0.144N	(e)	(e)	(e)

Dose	Males				Females			
	0 PPM	312 PPM	625 PPM	1250 PPM	0 PPM	312 PPM	625 PPM	1250 PPM

Mammary Gland
 Fibroadenoma

TUMOR RATES	0 PPM		312 PPM		625 PPM		1250 PPM	
	#	%	#	%	#	%	#	%
OVERALL (a)	2/50 (4%)	2/50 (4%)	0/50 (0%)	1/50 (2%)	27/50 (54%)	24/50 (48%)	15/50 (30%)	7/50 (14%)
POLY-3 RATE (b)	2/42.26	2/41.83	0/44.30	1/32.63	27/46.22	24/47.99	15/47.97	7/46.28
POLY-3 PERCENT (g)	4.7%	4.8%	0.0%	3.1%	58.4%	50.0%	31.3%	15.1%
TERMINAL (d)	1/22 (5%)	1/27 (4%)	0/31 (0%)	0/2 (0%)	19/32 (59%)	18/38 (47%)	12/37 (32%)	3/34 (9%)
FIRST INCIDENCE	681	657	---	529	528	693	609	686
STATISTICAL TESTS								
LIFE TABLE	P=0.527N	P=0.655N	P=0.181N	P=0.679	P<0.001N**	P=0.147N	P=0.005N**	P<0.001N**
POLY 3	P=0.307N	P=0.691	P=0.227N	P=0.589N	P<0.001N**	P=0.269N	P=0.006N**	P<0.001N**
POLY 1.5	P=0.306N	P=0.690	P=0.232N	P=0.545N	P<0.001N**	P=0.283N	P=0.007N**	P<0.001N**
POLY 6	P=0.296N	P=0.693N	P=0.218N	P=0.661N	P<0.001N**	P=0.275N	P=0.006N**	P<0.001N**
LOGISTIC REGRESSION	P=0.283N	P=0.692	P=0.224N	P=0.479N	P<0.001N**	P=0.224N	P=0.007N**	P<0.001N**
COCH-ARM / FISHERS	P=0.296N	P=0.691N	P=0.247N	P=0.500N	P<0.001N**	P=0.345N	P=0.013N*	P<0.001N**
ORDER RESTRICTED	P=0.331N	(e)	(e)	(e)	P<0.001N**	(e)	(e)	(e)

Dose	Males				Females			
	0 PPM	312 PPM	625 PPM	1250 PPM	0 PPM	312 PPM	625 PPM	1250 PPM

Mammary Gland
 Fibroma, Fibroadenoma or Adenoma

TUMOR RATES	#		#		#		#	
	Overall (a)	Poly-3 Rate (b)	Terminal (d)	First Incidence	Overall (a)	Poly-3 Rate (b)	Terminal (d)	First Incidence
OVERALL (a)	2/50 (4%)	2/50 (4%)	0/50 (0%)	1/50 (2%)	28/50 (56%)	25/50 (50%)	17/50 (34%)	7/50 (14%)
POLY-3 RATE (b)	2/42.26	2/41.83	0/44.30	1/32.63	28/47.16	25/48.34	17/48.16	7/46.28
POLY-3 PERCENT (g)	4.7%	4.8%	0.0%	3.1%	59.4%	51.7%	35.3%	15.1%
TERMINAL (d)	1/22 (5%)	1/27 (4%)	0/31 (0%)	0/2 (0%)	19/32 (59%)	18/38 (47%)	13/37 (35%)	3/34 (9%)
FIRST INCIDENCE	681	657	---	529	288	633	609	686

STATISTICAL TESTS	#		#		#		#	
	Overall (a)	Poly-3 Rate (b)	Terminal (d)	First Incidence	Overall (a)	Poly-3 Rate (b)	Terminal (d)	First Incidence
LIFE TABLE	P=0.527N	P=0.655N	P=0.181N	P=0.679	P<0.001N**	P=0.153N	P=0.010N*	P<0.001N**
POLY 3	P=0.307N	P=0.691	P=0.227N	P=0.589N	P<0.001N**	P=0.291N	P=0.013N*	P<0.001N**
POLY 1.5	P=0.306N	P=0.690	P=0.232N	P=0.545N	P<0.001N**	P=0.304N	P=0.015N*	P<0.001N**
POLY 6	P=0.296N	P=0.693N	P=0.218N	P=0.661N	P<0.001N**	P=0.292N	P=0.013N*	P<0.001N**
LOGISTIC REGRESSION	P=0.283N	P=0.692	P=0.224N	P=0.479N	P<0.001N**	P=0.306N	P=0.021N*	P<0.001N**
COCH-ARM / FISHERS	P=0.296N	P=0.691N	P=0.247N	P=0.500N	P<0.001N**	P=0.344N	P=0.022N*	P<0.001N**
ORDER RESTRICTED	P=0.331N	(e)	(e)	(e)	P<0.001N**	(e)	(e)	(e)

Dose	Males				Females			
	0 PPM	312 PPM	625 PPM	1250 PPM	0 PPM	312 PPM	625 PPM	1250 PPM

Mammary Gland
 Fibroma, Fibroadenoma, Carcinoma, or Adenoma

TUMOR RATES	#		#		#		#	
	Overall (a)	Poly-3 Rate (b)	Terminal (d)	First Incidence	Overall (a)	Poly-3 Rate (b)	Terminal (d)	First Incidence
OVERALL (a)	2/50 (4%)	2/50 (4%)	0/50 (0%)	1/50 (2%)	28/50 (56%)	25/50 (50%)	17/50 (34%)	7/50 (14%)
POLY-3 RATE (b)	2/42.26	2/41.83	0/44.30	1/32.63	28/47.16	25/48.34	17/48.16	7/46.28
POLY-3 PERCENT (g)	4.7%	4.8%	0.0%	3.1%	59.4%	51.7%	35.3%	15.1%
TERMINAL (d)	1/22 (5%)	1/27 (4%)	0/31 (0%)	0/2 (0%)	19/32 (59%)	18/38 (47%)	13/37 (35%)	3/34 (9%)
FIRST INCIDENCE	681	657	---	529	288	633	609	686

STATISTICAL TESTS	#		#		#		#	
	Overall (a)	Poly-3 Rate (b)	Terminal (d)	First Incidence	Overall (a)	Poly-3 Rate (b)	Terminal (d)	First Incidence
LIFE TABLE	P=0.527N	P=0.655N	P=0.181N	P=0.679	P<0.001N**	P=0.153N	P=0.010N*	P<0.001N**
POLY 3	P=0.307N	P=0.691	P=0.227N	P=0.589N	P<0.001N**	P=0.291N	P=0.013N*	P<0.001N**
POLY 1.5	P=0.306N	P=0.690	P=0.232N	P=0.545N	P<0.001N**	P=0.304N	P=0.015N*	P<0.001N**
POLY 6	P=0.296N	P=0.693N	P=0.218N	P=0.661N	P<0.001N**	P=0.292N	P=0.013N*	P<0.001N**
LOGISTIC REGRESSION	P=0.283N	P=0.692	P=0.224N	P=0.479N	P<0.001N**	P=0.306N	P=0.021N*	P<0.001N**
COCH-ARM / FISHERS	P=0.296N	P=0.691N	P=0.247N	P=0.500N	P<0.001N**	P=0.344N	P=0.022N*	P<0.001N**
ORDER RESTRICTED	P=0.331N	(e)	(e)	(e)	P<0.001N**	(e)	(e)	(e)

Dose	Males			Females		
	0 PPM	312 PPM	1250 PPM	0 PPM	312 PPM	1250 PPM

Oral Cavity (Oral Mucosa, Tongue, Pharynx, Tooth, Gingiva)
 Papilloma Squamous or Papilloma

TUMOR RATES	#					
	0 PPM	312 PPM	625 PPM	1250 PPM	0 PPM	312 PPM
OVERALL (a)	1/50 (2%)	2/50 (4%)	0/50 (0%)	2/50 (4%)	0/50 (0%)	0/50 (0%)
POLY-3 RATE (b)	1/42.08	2/41.56	0/44.30	2/32.72	0/44.12	0/47.49
POLY-3 PERCENT (g)	2.4%	4.8%	0.0%	6.1%	0.0%	0.0%
TERMINAL (d)	1/22 (5%)	2/27 (7%)	0/31 (0%)	0/2 (0%)	0/32 (0%)	0/38 (0%)
FIRST INCIDENCE	729 (T)	729 (T)	---	593	---	---

STATISTICAL TESTS

LIFE TABLE	P					
	0 PPM	312 PPM	625 PPM	1250 PPM	0 PPM	312 PPM
POLY 3	P=0.161	P=0.572	P=0.432N	P=0.173	(e)	(e)
POLY 1.5	P=0.417	P=0.496	P=0.490N	P=0.413	(e)	(e)
POLY 6	P=0.439	P=0.495	P=0.495N	P=0.456	(e)	(e)
LOGISTIC REGRESSION	P=0.407	P=0.501	P=0.481N	P=0.344	(e)	(e)
COCH-ARM / FISHERS	P=0.386	P=0.572	(e)	P=0.456	(e)	(e)
ORDER RESTRICTED	P=0.470	P=0.500	P=0.500N	P=0.500	(e)	(e)
	P=0.298	(e)	(e)	(e)	(e)	(e)

Oral Cavity (Oral Mucosa, Tongue, Pharynx, Tooth, Gingiva)
 Squamous Cell Carcinoma, Papilloma Squamous, or Papilloma

TUMOR RATES	#					
	0 PPM	312 PPM	625 PPM	1250 PPM	0 PPM	312 PPM
OVERALL (a)	1/50 (2%)	2/50 (4%)	0/50 (0%)	2/50 (4%)	0/50 (0%)	1/50 (2%)
POLY-3 RATE (b)	1/42.08	2/41.56	0/44.30	2/32.72	0/44.12	1/47.64
POLY-3 PERCENT (g)	2.4%	4.8%	0.0%	6.1%	0.0%	2.1%
TERMINAL (d)	1/22 (5%)	2/27 (7%)	0/31 (0%)	0/2 (0%)	0/32 (0%)	0/38 (0%)
FIRST INCIDENCE	729 (T)	729 (T)	---	593	---	690

STATISTICAL TESTS

LIFE TABLE	P					
	0 PPM	312 PPM	625 PPM	1250 PPM	0 PPM	312 PPM
POLY 3	P=0.161	P=0.572	P=0.432N	P=0.173	P=0.581N	P=0.523
POLY 1.5	P=0.417	P=0.496	P=0.490N	P=0.413	P=0.553N	P=0.515
POLY 6	P=0.439	P=0.495	P=0.495N	P=0.456	P=0.557N	P=0.511
LOGISTIC REGRESSION	P=0.407	P=0.501	P=0.481N	P=0.344	P=0.550N	P=0.519
COCH-ARM / FISHERS	P=0.386	P=0.572	(e)	P=0.456	P=0.575N	P=0.487
ORDER RESTRICTED	P=0.470	P=0.500	P=0.500N	P=0.500	P=0.567N	P=0.500
	P=0.298	(e)	(e)	(e)	P=0.389N	(e)

Pituitary Gland: Pars Distalis or Unspecified Site Adenoma

Dose	Males				Females			
	0 PPM	312 PPM	625 PPM	1250 PPM	0 PPM	312 PPM	625 PPM	1250 PPM

TUMOR RATES

Overall (a)	Poly-3 Rate (b)	Poly-3 Percent (g)	Terminal (d)	First Incidence
10/50 (20%)	6/50 (12%)	12/50 (24%)	5/50 (10%)	17/50 (34%)
10/43.58	6/42.41	12/45.83	5/33.77	17/45.66
23.0%	14.2%	26.2%	14.8%	37.2%
1/22 (5%)	3/27 (11%)	6/31 (19%)	0/2 (0%)	12/32 (38%)
584	535	499	569	430

STATISTICAL TESTS

Life Table	Poly 3	Poly 1.5	Logistic Regression	Coch-Arm / Fishers	Order Restricted
P=0.225	P=0.160N	P=0.539N	P=0.359	P=0.158N	P=0.177N
P=0.384N	P=0.219N	P=0.456	P=0.272N	P=0.157N	P=0.382N
P=0.284N	P=0.217N	P=0.433	P=0.194N	P=0.154N	P=0.488N
P=0.529	P=0.219N	P=0.492	P=0.439N	P=0.168N	P=0.520N
P=0.263N	P=0.212N	P=0.410	P=0.214N	P=0.150N	P=0.457N
P=0.192N	P=0.207N	P=0.405	P=0.131N	P=0.158N	P=0.575N
P=0.311N	(e)	(e)	(e)	P=0.158N	P=0.583N
				P=0.177N	(e)

Skin Basal Cell Adenoma

Dose	Males				Females			
	0 PPM	312 PPM	625 PPM	1250 PPM	0 PPM	312 PPM	625 PPM	1250 PPM

TUMOR RATES

Overall (a)	Poly-3 Rate (b)	Poly-3 Percent (g)	Terminal (d)	First Incidence
0/50 (0%)	3/50 (6%)	1/50 (2%)	0/50 (0%)	0/50 (0%)
0/42.08	3/41.98	1/44.30	0/32.01	0/44.12
0.0%	7.2%	2.3%	0.0%	0.0%
0/22 (0%)	2/27 (7%)	1/31 (3%)	0/2 (0%)	0/32 (0%)
---	609	729 (T)	---	---

STATISTICAL TESTS

Life Table	Poly 3	Poly 1.5	Logistic Regression	Coch-Arm / Fishers	Order Restricted
P=0.660N	P=0.146	P=0.568	(e)	(e)	(e)
P=0.454N	P=0.118	P=0.510	(e)	(e)	(e)
P=0.413N	P=0.117	P=0.505	(e)	(e)	(e)
P=0.531N	P=0.121	P=0.519	(e)	(e)	(e)
P=0.469N	P=0.119	P=0.568	(e)	(e)	(e)
P=0.366N	P=0.121	P=0.500	(e)	(e)	(e)
P=0.281N	(e)	(e)	(e)	(e)	(e)

Dose	Males				Females			
	0 PPM	312 PPM	625 PPM	1250 PPM	0 PPM	312 PPM	625 PPM	1250 PPM

Skin
 Basal Cell Adenoma, Basosquamous Tumor Benign, or
 Trichoepithelioma

TUMOR RATES	#		%		#		%	
	0 PPM	312 PPM	0.0%	7.2%	0.0%	0.38 (0%)	0.37 (0%)	0.34 (0%)
OVERALL (a)	0/50 (0%)	3/50 (6%)	2/50 (4%)	0/50 (0%)	0/50 (0%)	0/50 (0%)	0/50 (0%)	0/50 (0%)
POLY-3 RATE (b)	0/42.08	3/41.98	2/44.30	0/32.01	0/44.12	0/47.22	0/45.76	0/45.76
POLY-3 PERCENT (g)	0.0%	7.2%	4.5%	0.0%	0.0%	0.0%	0.0%	0.0%
TERMINAL (d)	0/22 (0%)	2/27 (7%)	2/31 (7%)	0/2 (0%)	0/32 (0%)	0/38 (0%)	0/37 (0%)	0/34 (0%)
FIRST INCIDENCE	---	609	729 (T)	---	---	---	---	---

STATISTICAL TESTS

LIFE TABLE	#		%		#		%	
	0 PPM	312 PPM	0.0%	7.2%	0.0%	0.38 (0%)	0.37 (0%)	0.34 (0%)
POLY 3	P=0.556	P=0.146	P=0.316	(e)	(e)	(e)	(e)	(e)
POLY 1.5	P=0.534N	P=0.118	P=0.243	(e)	(e)	(e)	(e)	(e)
POLY 6	P=0.474N	P=0.117	P=0.258	(e)	(e)	(e)	(e)	(e)
LOGISTIC REGRESSION	P=0.531	P=0.121	P=0.258	(e)	(e)	(e)	(e)	(e)
COCH-ARM / FISHERS	P=0.575N	P=0.119	P=0.316	(e)	(e)	(e)	(e)	(e)
ORDER RESTRICTED	P=0.409N	P=0.121	P=0.247	(e)	(e)	(e)	(e)	(e)

Dose	Males				Females			
	0 PPM	312 PPM	625 PPM	1250 PPM	0 PPM	312 PPM	625 PPM	1250 PPM

Skin
 Basal Cell Carcinoma, Basal Cell Adenoma, Basosquamous
 Tumor (benign, malignant or NOS), or Trichoepithelioma

TUMOR RATES	#		%		#		%	
	0 PPM	312 PPM	0.0%	7.2%	0.0%	0.38 (0%)	0.37 (0%)	0.34 (0%)
OVERALL (a)	0/50 (0%)	3/50 (6%)	2/50 (4%)	0/50 (0%)	0/50 (0%)	0/50 (0%)	0/50 (0%)	0/50 (0%)
POLY-3 RATE (b)	0/42.08	3/41.98	2/44.30	0/32.01	0/44.12	0/47.49	0/45.76	0/45.76
POLY-3 PERCENT (g)	0.0%	7.2%	4.5%	0.0%	0.0%	0.0%	0.0%	0.0%
TERMINAL (d)	0/22 (0%)	2/27 (7%)	2/31 (7%)	0/2 (0%)	0/32 (0%)	0/38 (0%)	0/37 (0%)	0/34 (0%)
FIRST INCIDENCE	---	609	729 (T)	---	---	---	---	---

STATISTICAL TESTS

LIFE TABLE	#		%		#		%	
	0 PPM	312 PPM	0.0%	7.2%	0.0%	0.38 (0%)	0.37 (0%)	0.34 (0%)
POLY 3	P=0.556	P=0.146	P=0.316	(e)	(e)	(e)	(e)	(e)
POLY 1.5	P=0.534N	P=0.118	P=0.243	(e)	(e)	(e)	(e)	(e)
POLY 6	P=0.474N	P=0.117	P=0.258	(e)	(e)	(e)	(e)	(e)
LOGISTIC REGRESSION	P=0.531	P=0.121	P=0.258	(e)	(e)	(e)	(e)	(e)
COCH-ARM / FISHERS	P=0.575N	P=0.119	P=0.316	(e)	(e)	(e)	(e)	(e)
ORDER RESTRICTED	P=0.409N	P=0.121	P=0.247	(e)	(e)	(e)	(e)	(e)

Dose	Males						Females		
	0 PPM	312 PPM	625 PPM	1250 PPM	0 PPM	312 PPM	625 PPM	1250 PPM	

Skin
 Fibroma, Fibrosarcoma, Sarcoma, Myxoma, Myxosarcoma,
 or Fibrous Histiocytoma

TUMOR RATES	#		#		#		#	
	OVERALL (a)	POLY-3 RATE (b)	TERMINAL (d)	FIRST INCIDENCE	OVERALL (a)	POLY-3 RATE (b)	TERMINAL (d)	FIRST INCIDENCE
OVERALL (a)	6/50 (12%)	3/50 (6%)	3/50 (6%)	2/50 (4%)	4/50 (8%)	0/50 (0%)	0/50 (0%)	0/50 (0%)
POLY-3 RATE (b)	6/42.42	3/41.77	3/44.46	2/32.95	4/44.16	0/47.49	0/47.22	0/45.76
TERMINAL (d)	14.2%	7.2%	6.8%	6.1%	9.1%	0.0%	0.0%	0.0%
FIRST INCIDENCE	3/22 (14%)	0/27 (0%)	2/31 (7%)	0/2 (0%)	2/32 (6%)	0/38 (0%)	0/37 (0%)	0/34 (0%)

LIFE TABLE	#		#		#		#	
	POLY 3	POLY 1.5	POLY 3	POLY 1.5	POLY 3	POLY 1.5	POLY 3	POLY 1.5
OVERALL (a)	P=0.498N	P=0.187N	P=0.127N	P=0.581	P=0.020N*	P=0.051N	P=0.055N	P=0.065N
POLY 3	P=0.158N	P=0.248N	P=0.218N	P=0.228N	P=0.020N*	P=0.052N	P=0.052N	P=0.056N
POLY 1.5	P=0.136N	P=0.249N	P=0.230N	P=0.177N	P=0.019N*	P=0.054N	P=0.055N	P=0.057N
LOGISTIC REGRESSION	P=0.188N	P=0.240N	P=0.199N	P=0.337N	P=0.020N*	P=0.051N	P=0.051N	P=0.056N
COCH-ARM / FISHERS	P=0.195N	P=0.232N	P=0.188N	P=0.280N	P=0.019N*	P=0.051N	P=0.053N	P=0.062N
ORDER RESTRICTED	P=0.112N	P=0.243N	P=0.243N	P=0.134N	P<0.001N**	P=0.059N	P=0.059N	P=0.059N

Dose	Males				Females			
	0 PPM	312 PPM	625 PPM	1250 PPM	0 PPM	312 PPM	625 PPM	1250 PPM

Skin
 Keratoacanthoma

TUMOR RATES	#		#		#		#	
	OVERALL (a)	POLY-3 RATE (b)	TERMINAL (d)	FIRST INCIDENCE	OVERALL (a)	POLY-3 RATE (b)	TERMINAL (d)	FIRST INCIDENCE
OVERALL (a)	10/50 (20%)	3/50 (6%)	3/50 (6%)	3/50 (6%)	3/50 (6%)	0/50 (0%)	2/50 (4%)	0/50 (0%)
POLY-3 RATE (b)	10/43.06	3/42.43	3/44.53	3/33.02	3/44.48	0/47.49	2/47.33	0/45.76
TERMINAL (d)	23.2%	7.1%	6.7%	9.1%	6.7%	0.0%	4.2%	0.0%
FIRST INCIDENCE	4/22 (18%)	0/27 (0%)	2/31 (7%)	0/2 (0%)	1/32 (3%)	0/38 (0%)	1/37 (3%)	0/34 (0%)

LIFE TABLE	#		#		#		#	
	POLY 3	POLY 1.5	POLY 3	POLY 1.5	POLY 3	POLY 1.5	POLY 3	POLY 1.5
OVERALL (a)	P=0.259N	P=0.030N*	P=0.014N*	P=0.565	P=0.125N	P=0.106N	P=0.457N	P=0.120N
POLY 3	P=0.047N*	P=0.035N*	P=0.028N*	P=0.093N	P=0.128N	P=0.107N	P=0.472N	P=0.114N
POLY 1.5	P=0.040N*	P=0.036N*	P=0.031N*	P=0.059N	P=0.127N	P=0.111N	P=0.480N	P=0.114N
LOGISTIC REGRESSION	P=0.053N	P=0.032N*	P=0.024N*	P=0.191N	P=0.131N	P=0.106N	P=0.468N	P=0.115N
COCH-ARM / FISHERS	P=0.044N*	P=0.038N*	P=0.029N*	P=0.137N	P=0.126N	P=0.120N	P=0.494N	P=0.119N
ORDER RESTRICTED	P=0.033N*	P=0.036N*	P=0.036N*	P=0.036N*	P=0.126N	P=0.121N	P=0.500N	P=0.121N

Dose	Males				Females			
	0 PPM	312 PPM	625 PPM	1250 PPM	0 PPM	312 PPM	625 PPM	1250 PPM
Skin Osteosarcoma								
TUMOR RATES								
OVERALL (a)	#	#	#	#	#	#	#	#
POLY-3 RATE (b)	1/50 (2%)	2/50 (4%)	0/50 (0%)	0/50 (0%)	0/50 (0%)	0/50 (0%)	0/50 (0%)	0/50 (0%)
POLY-3 PERCENT (g)	1/42.08	2/41.64	0/44.30	0/32.01	0/44.12	0/47.49	0/47.22	0/45.76
TERMINAL (d)	2.4%	4.8%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
FIRST INCIDENCE	1/22 (5%)	1/27 (4%)	0/31 (0%)	0/2 (0%)	0/32 (0%)	0/38 (0%)	0/37 (0%)	0/34 (0%)
FIRST (T)	729	710						
STATISTICAL TESTS								
LIFE TABLE	P=0.364N	P=0.568	P=0.432N	P=0.934N	(e)	(e)	(e)	(e)
POLY 3	P=0.202N	P=0.496	P=0.490N	P=0.554N	(e)	(e)	(e)	(e)
POLY 1.5	P=0.198N	P=0.496	P=0.495N	P=0.527N	(e)	(e)	(e)	(e)
POLY 6	P=0.210N	P=0.503	P=0.481N	P=0.598N	(e)	(e)	(e)	(e)
LOGISTIC REGRESSION	P=0.315N	P=0.527	(e)	(e)	(e)	(e)	(e)	(e)
COCH-ARM / FISHERS	P=0.188N	P=0.500	P=0.500N	P=0.500N	(e)	(e)	(e)	(e)
ORDER RESTRICTED	P=0.226N	(e)						

Dose	Males				Females			
	0 PPM	312 PPM	625 PPM	1250 PPM	0 PPM	312 PPM	625 PPM	1250 PPM
Skin Squamous Cell Papilloma								
TUMOR RATES								
OVERALL (a)	#	#	#	#	#	#	#	#
POLY-3 RATE (b)	1/50 (2%)	2/50 (4%)	0/50 (0%)	0/50 (0%)	0/50 (0%)	0/50 (0%)	0/50 (0%)	1/50 (2%)
POLY-3 PERCENT (g)	1/42.16	2/41.56	0/44.30	0/32.01	0/44.12	0/47.49	0/47.22	1/45.76
TERMINAL (d)	2.4%	4.8%	0.0%	0.0%	0.0%	0.0%	0.0%	2.2%
FIRST INCIDENCE	0/22 (0%)	2/27 (7%)	0/31 (0%)	0/2 (0%)	0/32 (0%)	0/38 (0%)	0/37 (0%)	1/34 (3%)
FIRST (T)	709	729						729
STATISTICAL TESTS								
LIFE TABLE	P=0.371N	P=0.563	P=0.460N	P=0.909N	P=0.195	(e)	(e)	P=0.512
POLY 3	P=0.202N	P=0.495	P=0.490N	P=0.554N	P=0.200	(e)	(e)	P=0.507
POLY 1.5	P=0.198N	P=0.495	P=0.495N	P=0.528N	P=0.200	(e)	(e)	P=0.506
POLY 6	P=0.211N	P=0.500	P=0.482N	P=0.599N	P=0.198	(e)	(e)	P=0.506
LOGISTIC REGRESSION	P=0.313N	P=0.525	P=0.485N	P=0.717N	(e)	(e)	(e)	P=0.512
COCH-ARM / FISHERS	P=0.188N	P=0.500	P=0.500N	P=0.500N	P=0.198	(e)	(e)	P=0.500
ORDER RESTRICTED	P=0.226N	(e)	(e)	(e)	P=0.127	(e)	(e)	(e)

Dose	Males				Females			
	0 PPM	312 PPM	625 PPM	1250 PPM	0 PPM	312 PPM	625 PPM	1250 PPM

Skin
 Squamous Cell Papilloma, Papilloma, Squamous Cell
 Carcinoma or Keratoacanthoma

TUMOR RATES	Males		Females	
	#	%	#	%
OVERALL (a)	11/50 (22%)	5/50 (10%)	3/50 (6%)	3/50 (6%)
POLY-3 RATE (b)	11/43.14	5/42.43	3/44.53	3/33.02
POLY-3 PERCENT (g)	25.5%	11.8%	6.7%	9.1%
TERMINAL (d)	4/22 (18%)	2/27 (7%)	2/31 (7%)	0/2 (0%)
FIRST INCIDENCE	584	590	669	537
STATISTICAL TESTS				
LIFE TABLE	P=0.179N	P=0.063N	P=0.008N**	P=0.592
POLY 3	P=0.021N*	P=0.086N	P=0.015N*	P=0.061N
POLY 1.5	P=0.017N*	P=0.087N	P=0.017N*	P=0.036N*
LOGISTIC REGRESSION	P=0.025N*	P=0.080N	P=0.013N*	P=0.141N
COCH-ARM / FISHERS	P=0.023N*	P=0.089N	P=0.016N*	P=0.103N
ORDER RESTRICTED	P=0.013N*	P=0.086N	P=0.020N*	P=0.020N*
		(e)	(e)	(e)
Dose	0 PPM	312 PPM	Males 625 PPM	1250 PPM
			Females 625 PPM	1250 PPM

Skin
 Squamous Cell Papilloma, Papilloma, or Keratoacanthoma

TUMOR RATES	Males		Females	
	#	%	#	%
OVERALL (a)	11/50 (22%)	5/50 (10%)	3/50 (6%)	3/50 (6%)
POLY-3 RATE (b)	11/43.14	5/42.43	3/44.53	3/33.02
POLY-3 PERCENT (g)	25.5%	11.8%	6.7%	9.1%
TERMINAL (d)	4/22 (18%)	2/27 (7%)	2/31 (7%)	0/2 (0%)
FIRST INCIDENCE	584	590	669	537
STATISTICAL TESTS				
LIFE TABLE	P=0.179N	P=0.063N	P=0.008N**	P=0.592
POLY 3	P=0.021N*	P=0.086N	P=0.015N*	P=0.061N
POLY 1.5	P=0.017N*	P=0.087N	P=0.017N*	P=0.036N*
LOGISTIC REGRESSION	P=0.025N*	P=0.080N	P=0.013N*	P=0.141N
COCH-ARM / FISHERS	P=0.023N*	P=0.089N	P=0.016N*	P=0.103N
ORDER RESTRICTED	P=0.013N*	P=0.086N	P=0.020N*	P=0.020N*
		(e)	(e)	(e)
Dose	0 PPM	312 PPM	Males 625 PPM	1250 PPM
			Females 625 PPM	1250 PPM

Testes
 Adenoma

 TUMOR RATES

Dose	0 PPM	312 PPM	Males 625 PPM	1250 PPM	0 PPM	312 PPM	Females 625 PPM	1250 PPM
OVERALL (a)	45/50 (90%)	46/50 (92%)	46/50 (92%)	48/50 (96%)				
POLY-3 RATE (b)	45/48.31	46/46.96	46/48.16	48/48.92				
POLY-3 PERCENT (g)	93.2%	98.0%	95.5%	98.1%				
TERMINAL (d)	22/22 (100%)	27/27 (100%)	31/31 (100%)	2/2 (100%)				
FIRST INCIDENCE	495	484	486	487				

STATISTICAL TESTS

LIFE TABLE	P<0.001 **	P=0.292N	P=0.055N	P<0.001 **
POLY 3	P=0.172	P=0.219	P=0.473	P=0.203
POLY 1.5	P=0.177	P=0.311	P=0.486	P=0.211
POLY 6	P=0.156	P=0.178	P=0.466	P=0.196
LOGISTIC REGRESSION	P=0.040 *	P=0.294	P=0.590	P=0.079
COCH-ARM / FISHERS	P=0.170	P=0.500	P=0.500	P=0.218
ORDER RESTRICTED	P=0.084	(e)	(e)	(e)

 Thyroid Gland: C-Cell
 Adenoma

TUMOR RATES

OVERALL (a)	10/50 (20%)	6/50 (12%)	9/50 (18%)	4/50 (8%)	4/50 (8%)	6/50 (12%)	3/50 (6%)	6/50 (12%)
POLY-3 RATE (b)	10/42.92	6/41.62	9/44.62	4/33.08	4/44.14	6/47.51	3/47.22	6/46.55
POLY-3 PERCENT (g)	23.3%	14.4%	20.2%	12.1%	9.1%	12.6%	6.4%	12.9%
TERMINAL (d)	5/22 (23%)	5/27 (19%)	6/31 (19%)	0/2 (0%)	3/32 (9%)	5/38 (13%)	3/37 (8%)	3/34 (9%)
FIRST INCIDENCE	638	715	691	621	724	725	729 (T)	480

STATISTICAL TESTS

LIFE TABLE	P=0.314	P=0.128N	P=0.248N	P=0.318	P=0.392	P=0.476	P=0.430N	P=0.398
POLY 3	P=0.197N	P=0.221N	P=0.462N	P=0.171N	P=0.415	P=0.417	P=0.463N	P=0.403
POLY 1.5	P=0.141N	P=0.218N	P=0.480N	P=0.115N	P=0.409	P=0.403	P=0.474N	P=0.395
POLY 6	P=0.300N	P=0.219N	P=0.431N	P=0.307N	P=0.414	P=0.426	P=0.457N	P=0.405
LOGISTIC REGRESSION	P=0.395N	P=0.191N	P=0.406N	P=0.354N	P=0.398	P=0.433	P=0.459N	P=0.378
COCH-ARM / FISHERS	P=0.093N	P=0.207N	P=0.500N	P=0.074N	P=0.388	P=0.370	P=0.500N	P=0.370
ORDER RESTRICTED	P=0.174N	(e)	(e)	(e)	P=0.439	(e)	(e)	(e)

Dose	Males			Females		
	0 PPM	312 PPM	1250 PPM	0 PPM	312 PPM	1250 PPM

Thyroid Gland: C-Cell Carcinoma

TUMOR RATES

OVERALL (a)	1/50 (2%)	2/50 (4%)	2/50 (4%)	1/50 (2%)	0/50 (0%)	1/50 (2%)
POLY-3 RATE (b)	1/42.08	2/41.56	2/44.30	1/32.09	0/44.12	1/47.22
POLY-3 PERCENT (g)	2.4%	4.8%	4.5%	3.1%	0.0%	2.1%
TERMINAL (d)	1/22 (5%)	2/27 (7%)	2/31 (7%)	0/2 (0%)	0/32 (0%)	1/37 (3%)
FIRST INCIDENCE	729 (T)	729 (T)	729 (T)	708	---	729 (T)

STATISTICAL TESTS

LIFE TABLE	P=0.220	P=0.572	P=0.620	P=0.354	P=0.385	P=0.529
POLY 3	P=0.533	P=0.496	P=0.518	P=0.697	P=0.396	P=0.514
POLY 1.5	P=0.597	P=0.495	P=0.509	P=0.729	P=0.394	P=0.510
POLY 6	P=0.444	P=0.501	P=0.533	P=0.635	P=0.393	P=0.516
LOGISTIC REGRESSION	P=0.277	P=0.572	P=0.620	P=0.442	(e)	P=0.534
COCH-ARM / FISHERS	P=0.556N	P=0.500	P=0.500	P=0.753N	P=0.384	P=0.529
ORDER RESTRICTED	P=0.545	(e)	(e)	(e)	P=0.335	P=0.500

Dose	Males			Females		
	0 PPM	312 PPM	1250 PPM	0 PPM	312 PPM	1250 PPM

Thyroid Gland: C-Cell Carcinoma or Adenoma

TUMOR RATES

OVERALL (a)	11/50 (22%)	8/50 (16%)	10/50 (20%)	5/50 (10%)	4/50 (8%)	7/50 (14%)
POLY-3 RATE (b)	11/42.92	8/41.62	10/44.62	5/33.16	4/44.14	7/47.51
POLY-3 PERCENT (g)	25.6%	19.2%	22.4%	15.1%	9.1%	14.7%
TERMINAL (d)	6/22 (27%)	7/27 (26%)	7/31 (23%)	0/2 (0%)	3/32 (9%)	6/38 (16%)
FIRST INCIDENCE	638	715	691	621	724	725

STATISTICAL TESTS

LIFE TABLE	P=0.210	P=0.183N	P=0.230N	P=0.181	P=0.300	P=0.364
POLY 3	P=0.205N	P=0.327N	P=0.459N	P=0.201N	P=0.325	P=0.305
POLY 1.5	P=0.143N	P=0.322N	P=0.479N	P=0.135N	P=0.319	P=0.292
POLY 6	P=0.318N	P=0.327N	P=0.426N	P=0.359N	P=0.324	P=0.314
LOGISTIC REGRESSION	P=0.492N	P=0.276N	P=0.390N	P=0.492N	P=0.305	P=0.319
COCH-ARM / FISHERS	P=0.091N	P=0.306N	P=0.500N	P=0.086N	P=0.297	P=0.262
ORDER RESTRICTED	P=0.221N	(e)	(e)	(e)	P=0.305	(e)

Dose	Males				Females			
	0 PPM	312 PPM	625 PPM	1250 PPM	0 PPM	312 PPM	625 PPM	1250 PPM

Thyroid Gland: Follicular Cell
 Adenoma

TUMOR RATES	Males				Females			
	0 PPM	312 PPM	625 PPM	1250 PPM	0 PPM	312 PPM	625 PPM	1250 PPM
OVERALL (a)	2/50 (4%)	2/50 (4%)	3/50 (6%)	3/50 (6%)	0/50 (0%)	0/50 (0%)	0/50 (0%)	1/50 (2%)
POLY-3 RATE (b)	2/42.42	2/41.70	3/44.71	3/33.80	0/44.12	0/47.49	0/47.22	1/45.76
POLY-3 PERCENT (g)	4.7%	4.8%	6.7%	8.9%	0.0%	0.0%	0.0%	2.2%
TERMINAL (d)	1/22 (5%)	0/27 (0%)	2/31 (7%)	0/2 (0%)	0/32 (0%)	0/38 (0%)	0/37 (0%)	1/34 (3%)
FIRST INCIDENCE	634	709	613	487	---	---	---	729 (T)

LIFE TABLE	Males				Females			
	0 PPM	312 PPM	625 PPM	1250 PPM	0 PPM	312 PPM	625 PPM	1250 PPM
POLY 3	P=0.100	P=0.654N	P=0.594	P=0.275	P=0.195	(e)	(e)	P=0.512
POLY 1.5	P=0.272	P=0.688	P=0.524	P=0.398	P=0.200	(e)	(e)	P=0.507
POLY 6	P=0.318	P=0.688	P=0.513	P=0.448	P=0.200	(e)	(e)	P=0.506
LOGISTIC REGRESSION	P=0.211	P=0.693	P=0.543	P=0.314	P=0.198	(e)	(e)	P=0.506
COCH-ARM / FISHERS	P=0.446	P=0.692	P=0.499	P=0.675N	(e)	(e)	(e)	P=0.512
ORDER RESTRICTED	P=0.377	P=0.691N	P=0.500	P=0.500	P=0.198	(e)	(e)	P=0.500
		(e)	(e)	(e)	P=0.127	(e)	(e)	(e)

Dose	Males				Females			
	0 PPM	312 PPM	625 PPM	1250 PPM	0 PPM	312 PPM	625 PPM	1250 PPM
Uterus								
Polyp Stromal								

TUMOR RATES	Males				Females			
	0 PPM	312 PPM	625 PPM	1250 PPM	0 PPM	312 PPM	625 PPM	1250 PPM
OVERALL (a)	6/50 (12%)	9/50 (18%)	10/50 (20%)	10/50 (20%)	6/50 (12%)	9/50 (18%)	10/50 (20%)	10/50 (20%)
POLY-3 RATE (b)	6/44.12	9/47.99	10/47.66	10/46.21	6/44.12	9/47.99	10/47.66	10/46.21
POLY-3 PERCENT (g)	13.6%	18.8%	21.0%	21.6%	13.6%	18.8%	21.0%	21.6%
TERMINAL (d)	6/32 (19%)	7/38 (18%)	8/37 (22%)	8/34 (24%)	6/32 (19%)	7/38 (18%)	8/37 (22%)	8/34 (24%)
FIRST INCIDENCE	729 (T)	633	633	653	729 (T)	633	633	653

LIFE TABLE	Males				Females			
	0 PPM	312 PPM	625 PPM	1250 PPM	0 PPM	312 PPM	625 PPM	1250 PPM
POLY 3	P=0.203	P=0.413	P=0.300	P=0.243	P=0.203	P=0.413	P=0.300	P=0.243
POLY 1.5	P=0.218	P=0.350	P=0.257	P=0.234	P=0.218	P=0.350	P=0.257	P=0.234
POLY 6	P=0.215	P=0.330	P=0.240	P=0.228	P=0.215	P=0.330	P=0.240	P=0.228
LOGISTIC REGRESSION	P=0.235	P=0.368	P=0.270	P=0.236	P=0.235	P=0.368	P=0.270	P=0.236
COCH-ARM / FISHERS	P=0.204	P=0.350	P=0.258	P=0.219	P=0.204	P=0.350	P=0.258	P=0.219
ORDER RESTRICTED	P=0.198	P=0.288	P=0.207	P=0.207	P=0.198	P=0.288	P=0.207	P=0.207
	P=0.268	(e)	(e)	(e)	P=0.268	(e)	(e)	(e)

Dose	Males			Females		
	0 PPM	312 PPM	1250 PPM	0 PPM	312 PPM	1250 PPM
All Organs						
Histiocytic Sarcoma						

TUMOR RATES	Males		Females	
	#	%	#	%
OVERALL (a)	0/50 (0%)	0/50 (0%)	0/50 (0%)	0/50 (0%)
POLY-3 RATE (b)	0/42.08	0/41.56	0/44.30	0/32.01
POLY-3 PERCENT (g)	0.0%	0.0%	0.0%	0.0%
TERMINAL (d)	0/22 (0%)	0/27 (0%)	0/31 (0%)	0/2 (0%)
FIRST INCIDENCE				
STATISTICAL TESTS				
LIFE TABLE				
POLY 3	(e)	(e)	(e)	(e)
POLY 1.5	(e)	(e)	(e)	(e)
POLY 6	(e)	(e)	(e)	(e)
LOGISTIC REGRESSION				
COCH-ARM / FISHERS	(e)	(e)	(e)	(e)
ORDER RESTRICTED	(e)	(e)	(e)	(e)

Dose	Males			Females		
	0 PPM	312 PPM	1250 PPM	0 PPM	312 PPM	1250 PPM
All Organs						
Leukemia: Lymphocytic, Monocytic, Mononuclear, or Undifferentiated						

TUMOR RATES	Males		Females	
	#	%	#	%
OVERALL (a)	27/50 (54%)	41/50 (82%)	39/50 (78%)	24/50 (48%)
POLY-3 RATE (b)	27/48.36	41/49.82	39/48.01	24/40.48
POLY-3 PERCENT (g)	55.8%	82.3%	81.2%	59.3%
TERMINAL (d)	6/22 (27%)	20/27 (74%)	25/31 (81%)	2/2 (100%)
FIRST INCIDENCE	425	344	494	487

STATISTICAL TESTS	Males		Females	
	P	%	P	%
LIFE TABLE				
POLY 3	P<0.001 **	P=0.086	P=0.317	P=0.003 **
POLY 1.5	P=0.508	P=0.003 **	P=0.005 **	P=0.454
POLY 6	P=0.292N	P=0.002 **	P=0.006 **	P=0.540N
LOGISTIC REGRESSION	P=0.135	P=0.004 **	P=0.004 **	P=0.196
COCH-ARM / FISHERS	P=0.062N	P=0.002 **	P=0.008 **	P=0.139N
ORDER RESTRICTED	P=0.091N	P=0.002 **	P=0.010 *	P=0.345N

 Dose 0 PPM 312 PPM Males 625 PPM 1250 PPM 0 PPM 312 PPM Females 625 PPM 1250 PPM

 All Organs
 Mesothelioma: Benign, Malignant, NOS

TUMOR RATES

	#	#	#	#	#	#	#	#	#
OVERALL (a)	2/50 (4%)	3/50 (6%)	2/50 (4%)	0/50 (0%)	0/50 (0%)	0/50 (0%)	0/50 (0%)	0/50 (0%)	0/50 (0%)
POLY-3 RATE (b)	2/42.65	3/42.03	2/44.77	0/32.01	0/44.12	0/47.49	0/47.22	0/45.76	0/45.76
POLY-3 PERCENT (g)	4.7%	7.1%	4.5%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
TERMINAL (d)	1/22 (5%)	2/27 (7%)	0/31 (0%)	0/2 (0%)	0/32 (0%)	0/38 (0%)	0/37 (0%)	0/34 (0%)	0/34 (0%)
FIRST INCIDENCE	549	590	624	---	---	---	---	---	---

STATISTICAL TESTS

LIFE TABLE

POLY 3	P=0.286N	P=0.547	P=0.635N	P=0.466N	(e)	(e)	(e)	(e)
POLY 1.5	P=0.203N	P=0.493	P=0.677N	P=0.306N	(e)	(e)	(e)	(e)
POLY 6	P=0.169N	P=0.493	P=0.685N	P=0.271N	(e)	(e)	(e)	(e)
LOGISTIC REGRESSION	P=0.270N	P=0.508	P=0.661N	P=0.372N	(e)	(e)	(e)	(e)
COCH-ARM / FISHERS	P=0.122N	P=0.508	P=0.670	P=0.194N	(e)	(e)	(e)	(e)
ORDER RESTRICTED	P=0.134N	P=0.500	P=0.691N	P=0.247N	(e)	(e)	(e)	(e)

Dose 0 PPM 312 PPM Males 625 PPM 1250 PPM 0 PPM 312 PPM Females 625 PPM 1250 PPM

 All Organs
 Mesothelioma: Malignant

TUMOR RATES

	#	#	#	#	#	#	#	#
OVERALL (a)	2/50 (4%)	3/50 (6%)	2/50 (4%)	0/50 (0%)	0/50 (0%)	0/50 (0%)	0/50 (0%)	0/50 (0%)
POLY-3 RATE (b)	2/42.65	3/42.03	2/44.77	0/32.01	0/44.12	0/47.49	0/47.22	0/45.76
POLY-3 PERCENT (g)	4.7%	7.1%	4.5%	0.0%	0.0%	0.0%	0.0%	0.0%
TERMINAL (d)	1/22 (5%)	2/27 (7%)	0/31 (0%)	0/2 (0%)	0/32 (0%)	0/38 (0%)	0/37 (0%)	0/34 (0%)
FIRST INCIDENCE	549	590	624	---	---	---	---	---

STATISTICAL TESTS

LIFE TABLE

POLY 3	P=0.286N	P=0.547	P=0.635N	P=0.466N	(e)	(e)	(e)	(e)
POLY 1.5	P=0.203N	P=0.493	P=0.677N	P=0.306N	(e)	(e)	(e)	(e)
POLY 6	P=0.169N	P=0.493	P=0.685N	P=0.271N	(e)	(e)	(e)	(e)
LOGISTIC REGRESSION	P=0.270N	P=0.500	P=0.661N	P=0.372N	(e)	(e)	(e)	(e)
COCH-ARM / FISHERS	P=0.122N	P=0.508	P=0.670	P=0.194N	(e)	(e)	(e)	(e)
ORDER RESTRICTED	P=0.134N	P=0.500	P=0.691N	P=0.247N	(e)	(e)	(e)	(e)

Dose	Males				Females			
	0 PPM	312 PPM	625 PPM	1250 PPM	0 PPM	312 PPM	625 PPM	1250 PPM

All Organs
 Benign Tumors

TUMOR RATES	#		#		#		#	
	Overall (a)	Poly-3 Rate (b)	Overall (a)	Poly-3 Rate (b)	Overall (a)	Poly-3 Rate (b)	Overall (a)	Poly-3 Rate (b)
OVERALL (a)	49/50 (98%)	47/50 (94%)	49/50 (98%)	50/50 (100%)	42/50 (84%)	40/50 (80%)	37/50 (74%)	33/50 (66%)
POLY-3 RATE (b)	49/49.20	47/47.56	49/49.31	50/50.00	42/48.73	40/49.18	37/49.11	33/48.18
POLY-3 PERCENT (g)	99.6%	98.8%	99.4%	100.0%	86.2%	81.3%	75.4%	68.5%
TERMINAL (d)	22/22 (100%)	27/27 (100%)	31/31 (100%)	2/2 (100%)	27/32 (84%)	30/38 (79%)	28/37 (76%)	22/34 (65%)
FIRST INCIDENCE	495	484	486	487	288	613	609	480

STATISTICAL TESTS

LIFE TABLE	P<0.001 **	P=0.165N	P=0.046N*	P<0.001 **	P=0.052N	P=0.119N	P=0.068N	P=0.059N
POLY 3	P=0.655	P=0.932N	P=0.991N	P=1.000	P=0.016N*	P=0.351N	P=0.130N	P=0.028N*
POLY 1.5	P=0.349	P=0.576N	P=0.891N	P=0.891	P=0.015N*	P=0.358N	P=0.136N	P=0.026N*
POLY 6	P=1.000	P=1.000N	P=1.000N	P=1.000	P=0.020N*	P=0.358N	P=0.131N	P=0.034N*
LOGISTIC REGRESSION	P=0.406	P=0.633N	P=0.712N	(e)	P=0.014N*	P=0.335N	P=0.137N	P=0.027N*
COCH-ARM / FISHERS	P=0.200	P=0.309N	P=0.753N	P=0.500	P=0.017N*	P=0.398N	P=0.163N	P=0.032N*
ORDER RESTRICTED	P=0.232	(e)	(e)	(e)	P=0.021N*	(e)	(e)	(e)

Dose	Males				Females			
	0 PPM	312 PPM	625 PPM	1250 PPM	0 PPM	312 PPM	625 PPM	1250 PPM

All Organs
 Malignant Tumors

TUMOR RATES	#		#		#		#	
	Overall (a)	Poly-3 Rate (b)						
OVERALL (a)	33/50 (66%)	42/50 (84%)	40/50 (80%)	26/50 (52%)	20/50 (40%)	29/50 (58%)	32/50 (64%)	32/50 (64%)
POLY-3 RATE (b)	33/49.44	42/49.82	40/48.38	26/41.59	20/44.93	29/48.98	32/49.71	32/49.17
POLY-3 PERCENT (g)	66.7%	84.3%	82.7%	62.5%	44.5%	59.2%	64.4%	65.1%
TERMINAL (d)	9/22 (41%)	21/27 (78%)	25/31 (81%)	2/2 (100%)	13/32 (41%)	22/38 (58%)	21/37 (57%)	22/34 (65%)
FIRST INCIDENCE	425	344	494	487	637	609	528	480

STATISTICAL TESTS

LIFE TABLE	P=0.004 **	P=0.268	P=0.479N	P=0.006 **	P=0.038	P=0.224	P=0.096	P=0.047 *
POLY 3	P=0.275N	P=0.033 *	P=0.053	P=0.417N	P=0.041 *	P=0.109	P=0.039 *	P=0.033 *
POLY 1.5	P=0.094N	P=0.032 *	P=0.063	P=0.243N	P=0.031 *	P=0.087	P=0.026 *	P=0.024 *
POLY 6	P=0.393	P=0.035 *	P=0.047 *	P=0.456	P=0.051 *	P=0.129	P=0.054 *	P=0.041 *
LOGISTIC REGRESSION	P=0.008N**	P=0.015 *	P=0.064	P=0.017N*	P=0.018 *	P=0.101	P=0.023 *	P=0.018 *
COCH-ARM / FISHERS	P=0.019N*	P=0.032 *	P=0.088	P=0.111N	P=0.016 *	P=0.055	P=0.014 *	P=0.014 *
ORDER RESTRICTED	P=0.059N	(e)	(e)	(e)	P=0.029 *	(e)	(e)	(e)

Dose	Males				Females			
	0 PPM	312 PPM	625 PPM	1250 PPM	0 PPM	312 PPM	625 PPM	1250 PPM
All Organs								
Malignant and Benign Tumors								

TUMOR RATES	#	#	#	#	#	#	#	#
OVERALL (a)	50/50 (100%)	50/50 (100%)	50/50 (100%)	50/50 (100%)	46/50 (92%)	46/50 (92%)	45/50 (90%)	44/50 (88%)
POLY-3 RATE (b)	50/50.00	50/50.00	50/50.00	50/50.00	46/48.75	46/50.00	45/50.00	44/50.00
POLY-3 PERCENT (g)	100.0%	100.0%	100.0%	100.0%	94.4%	92.0%	90.0%	88.0%
TERMINAL (d)	22/22 (100%)	27/27 (100%)	31/31 (100%)	2/2 (100%)	30/32 (94%)	34/38 (90%)	32/37 (87%)	28/34 (82%)
FIRST INCIDENCE	425	344	486	487	288	609	528	480
STATISTICAL TESTS								
LIFE TABLE	(e)	(e)	(e)	(e)	P=0.349N	P=0.159N	P=0.173N	P=0.309N
POLY 3	(e)	(e)	(e)	(e)	P=0.167N	P=0.473N	P=0.330N	P=0.221N
POLY 1.5	(e)	(e)	(e)	(e)	P=0.197N	P=0.531N	P=0.384N	P=0.265N
POLY 6	(e)	(e)	(e)	(e)	P=0.144N	P=0.420N	P=0.285N	P=0.185N
LOGISTIC REGRESSION	(e)	(e)	(e)	(e)	P=0.268N	P=0.549N	P=0.422N	P=0.340N
COCH-ARM / FISHERS	(e)	(e)	(e)	(e)	P=0.270N	P=0.643N	P=0.500N	P=0.370N
ORDER RESTRICTED	(e)	(e)	(e)	(e)	P=0.210N	(e)	(e)	(e)

(a) Number of tumor-bearing animals / number of animals examined at site.
 (b) Number of tumor-bearing animals at terminal kill.
 (d) Observed incidence at terminal kill.
 (f) Beneath the control incidence are the P-values associated with the trend test. Beneath the dosed group incidence are the P-values corresponding to pairwise comparisons between the controls and that dosed group. The life table analysis regards tumors in animals dying prior to terminal kill as being (directly or indirectly) the cause of death.
 Logistic regression is an alternative method for analyzing the incidence of non-fatal tumors. The Cochran-Armitage and Fishers exact tests compare directly the overall incidence rates and for all tests a negative trend is indicated by N
 (e) Value of Statistic cannot be computed.
 (g) Poly-3 adjusted lifetime tumor incidence.
 (I) Interim sacrifice
 (T) Terminal sacrifice
 # Tumor rates based on number of animals necropsied.
 * To the right of any statistical result, indicates significance at (P<=0.05).
 ** To the right of any statistical result, indicates significance at (P<=0.01).

NTP Experiment-Test: 88138-03 INCIDENCE RATES OF NEOPLASMS BY ANATOMIC SITE (SYSTEMIC LESIONS ABRIDGED) (a)
Study Type: CHRONIC BENZOPHENONE
Route: DOSED FEED

Report: PETRPT05
Date: 07/21/03
Time: 15:18:50

FINAL #1 RATS

Facility: Battelle Columbus Laboratory
Chemical CAS #: 119-61-9
Lock Date: 04/26/02
Cage Range: All
Reasons For Removal: All
Removal Date Range: All
Treatment Groups: Include All

a Number of animals examined microscopically at site and number of animals with lesion

NTP Experiment-Test: 88138-03 INCIDENCE RATES OF NEOPLASMS BY ANATOMIC SITE (SYSTEMIC LESIONS ABRIDGED) (a)
 Study Type: CHRONIC BENZOPHENONE
 Route: DOSED FEED

Report: PEIRPT05
 Date: 07/21/03
 Time: 15:18:50

FISCHER 344 RATS FEMALE 0 PPM 312 PPM 625 PPM 1250 PPM

DISPOSITION SUMMARY

Animals Initially in Study	50	50	50	50
Early Deaths	16	10	9	13
Moribund Sacrifice	2	2	4	3
Natural Death				
Survivors	32	38	37	34
Terminal Sacrifice				
Animals Examined Microscopically	50	50	50	50

ALIMENTARY SYSTEM

Esophagus	(50)	(50)	(50)	(50)
Histiocytic Sarcoma			1 (2%)	1 (2%)
Intestine Large, Rectum	(50)	(50)	(50)	(50)
Histiocytic Sarcoma			1 (2%)	1 (2%)
Intestine Large, Cecum	(50)	(50)	(50)	(50)
Carcinoma			1 (2%)	1 (2%)
Intestine Small, Jejunum	(50)	(50)	1 (2%)	(50)
Schwannoma Malignant			(50)	(50)
Intestine Small, Ileum	(50)	(50)	(50)	(50)
Liver			1 (2%)	
Hepatocellular Carcinoma			1 (2%)	2 (4%)
Hepatocellular Adenoma			1 (2%)	(6)
Histiocytic Sarcoma	(12)	(18)	(10)	1 (17%)
Mesentery				
Histiocytic Sarcoma				(4)
Oral Mucosa	(4)	(8)	1 (13%)	
Gingival, Squamous Cell Carcinoma			(50)	(50)
Pancreas	(50)	(50)	(50)	(50)
Salivary Glands	(50)	(50)	1 (2%)	
Histiocytic Sarcoma			(50)	1 (2%)
Schwannoma Malignant				(50)
Stomach, Glandular			1 (2%)	
Histiocytic Sarcoma	(50)	(50)		(3)
Tooth				

FISCHER 344 RATS FEMALE 0 PPM 312 PPM 625 PPM 1250 PPM

CARDIOVASCULAR SYSTEM

Blood Vessel	(50)	(50)	(50)	(50)
Heart	(50)	(50)	(50)	(50)
Histiocytic Sarcoma			1 (2%)	1 (2%)
Endocardium, Schwannoma Malignant	1 (2%)			

ENDOCRINE SYSTEM

Adrenal Cortex	(50)	(50)	(50)	(50)
Adenoma				1 (2%)
Adrenal Medulla	(50)	(50)	(50)	(50)
Pheochromocytoma Benign		2 (4%)	2 (4%)	(50)
Islets, Pancreatic	(50)	(50)	(50)	(50)
Adenoma		2 (4%)	2 (4%)	1 (2%)
Parathyroid Gland	(47)	(48)	(44)	(48)
Adenoma		1 (2%)	1 (2%)	(50)
Pituitary Gland	(50)	(50)	(50)	(50)
Pars Distalis, Adenoma	17 (34%)	17 (34%)	11 (22%)	13 (26%)
Thyroid Gland	(50)	(50)	(50)	(50)
Histiocytic Sarcoma			1 (2%)	
Bilateral, C-Cell, Carcinoma			1 (2%)	
C-Cell, Adenoma			1 (2%)	
C-Cell, Carcinoma			3 (6%)	
Follicular Cell, Adenoma	4 (8%)	6 (12%)		6 (12%)
		1 (2%)		1 (2%)
				1 (2%)

GENERAL BODY SYSTEM

None

GENITAL SYSTEM

Clitoral Gland	(50)	(50)	(50)	(50)
Adenoma	2 (4%)		5 (10%)	6 (12%)
Carcinoma	1 (2%)	2 (4%)	2 (4%)	1 (2%)
Histiocytic Sarcoma			1 (2%)	
Squamous Cell Papilloma				
Bilateral, Adenoma	1 (2%)	1 (2%)		
Ovary	1 (2%)			
Granulosa Cell Tumor Benign	(50)	(50)	(50)	(50)
Histiocytic Sarcoma				1 (2%)

NTP Experiment-Test: 88138-03 INCIDENCE RATES OF NEOPLASMS BY ANATOMIC SITE (SYSTEMIC LESIONS ABRIDGED) (a)
 Study Type: CHRONIC BENZOPHENONE
 Route: DOSED FEED

Report: PEIRPT05
 Date: 07/21/03
 Time: 15:18:50

FISCHER 344 RATS FEMALE

0 PPM

312 PPM

625 PPM

1250 PPM

GENITAL SYSTEM - cont

Uterus	(50)	(50)	(50)	(50)
PolyP Stromal	6 (12%)	9 (18%)	10 (20%)	10 (20%)
Cervix, Histiocytic Sarcoma				1 (2%)
Cervix, Schwannoma Malignant				1 (2%)
Vagina		(1)		
Schwannoma Malignant		1 (100%)		

HEMATOPOIETIC SYSTEM

Bone Marrow	(50)	(50)	(50)	(50)
Histiocytic Sarcoma			1 (2%)	
Lymph Node	(8)	(8)	(11)	(12)
Deep Cervical, Carcinoma, Metastatic,			1 (9%)	
Thyroid Gland		(1)	(1)	(1)
Lymph Node, Mandibular	(50)	(50)	(50)	(50)
Lymph Node, Mesenteric	(49)	(50)	(50)	(50)
Spleen	(50)	(49)	(46)	(50)
Thymus			1 (2%)	
Carcinoma, Metastatic, Thyroid Gland		1 (2%)		
Histiocytic Sarcoma			1 (2%)	
Thymoma Malignant				

INTEGUMENTARY SYSTEM

Mammary Gland	(50)	(50)	(50)	(50)
Adenoma	2 (4%)	2 (4%)	3 (6%)	
Carcinoma		1 (2%)	1 (2%)	
Fibroadenoma	21 (42%)	20 (40%)	12 (24%)	7 (14%)
Fibroadenoma, Multiple	6 (12%)	4 (8%)	3 (6%)	
Histiocytic Sarcoma			1 (2%)	
Skin	(50)	(50)	(50)	(50)
Histiocytic Sarcoma			1 (2%)	
Keratocanthoma	3 (6%)	1 (2%)	2 (4%)	
Lipoma				
Squamous Cell Papilloma				1 (2%)
Subcutaneous Tissue, Fibroma	3 (6%)			
Subcutaneous Tissue, Fibrosarcoma	1 (2%)			

NTP Experiment-Test: 88138-03 INCIDENCE RATES OF NEOPLASMS BY ANATOMIC SITE (SYSTEMIC LESIONS ABRIDGED) (a)
 Study Type: CHRONIC
 Route: DOSED FEED

BENZOPHENONE

Report: PETRPT05
 Date: 07/21/03
 Time: 15:18:50

FISCHER 344 RATS FEMALE

0 PPM

312 PPM

625 PPM

1250 PPM

MUSCULOSKELETAL SYSTEM

Skeletal Muscle	(1)	(1)	(3)	(1)
Histiocytic Sarcoma			1 (33%)	1 (100%)
Rhabdomyosarcoma			1 (33%)	
Sarcoma			1 (33%)	

NERVOUS SYSTEM

Brain	(50)	(50)	(50)	(50)
-------	------	------	------	------

RESPIRATORY SYSTEM

Lung	(50)	(50)	(50)	(50)
Alveolar/Bronchiolar Adenoma	4 (8%)		1 (2%)	
Carcinoma, Metastatic, Thyroid Gland			1 (2%)	1 (2%)
Histiocytic Sarcoma			1 (2%)	3 (6%)
Nose	(50)	(50)	(50)	(50)
Adenoma			1 (2%)	
Trachea	(50)	(50)	(50)	(50)
Carcinoma, Metastatic, Thyroid Gland			1 (2%)	
Histiocytic Sarcoma				1 (2%)

SPECIAL SENSES SYSTEM

Eye	(50)	(50)	(50)	(50)
Histiocytic Sarcoma			1 (2%)	
Iris, Melanoma Benign	1 (2%)			
Zymbal's Gland			(1)	(1)
Carcinoma				1 (100%)

URINARY SYSTEM

Kidney	(50)	(50)	(50)	(50)
Histiocytic Sarcoma			2 (4%)	1 (2%)
Renal Tubule, Adenoma, Multiple			(50)	1 (2%)
Urinary Bladder	(50)	(50)	(50)	(50)
Histiocytic Sarcoma			1 (2%)	1 (2%)

NTP Experiment Test: 88138-03 INCIDENCE RATES OF NEOPLASMS BY ANATOMIC SITE (SYSTEMIC LESIONS ABRIDGED) (a)
 Study Type: CHRONIC BENZOPHENONE
 Route: DOSED FEED

Report: PEIRPT05
 Date: 07/21/03
 Time: 15:18:50

FISCHER 344 RATS FEMALE 0 PPM 312 PPM 625 PPM 1250 PPM

SYSTEMIC LESIONS	0 PPM	312 PPM	625 PPM	1250 PPM
Multiple Organs	* (50)	* (50)	* (50)	* (50)
Histiocytic Sarcoma	19 (38%)	25 (50%)	1 (2%)	3 (6%)
Leukemia Mononuclear			30 (60%)	29 (58%)

* Number of animals with any tissue examined microscopically

NTP Experiment-Test: 88138-03 INCIDENCE RATES OF NEOPLASMS BY ANATOMIC SITE (SYSTEMIC LESIONS ABRIDGED) (a)
 Study Type: CHRONIC BENZOPHENONE
 Route: DOSED FEED

Report: PETRPT05
 Date: 07/21/03
 Time: 15:18:50

FISCHER 344 RATS FEMALE 0 PPM 312 PPM 625 PPM 1250 PPM

TUMOR SUMMARY

Total Animals with Primary Neoplasms (b)	46	46	45	44
Total Primary Neoplasms	93	95	97	86
Total Animals with Benign Neoplasms	42	40	37	33
Total Benign Neoplasms	71	62	59	48
Total Animals with Malignant Neoplasms	20	29	32	32
Total Malignant Neoplasms	22	33	38	38
Total Animals with Metastatic Neoplasms			1	1
Total Metastatic Neoplasm			4	1
Total Animals with Malignant Neoplasms Uncertain Primary Site				
Total Animals with Neoplasms Uncertain-Benign or Malignant				
Total Uncertain Neoplasms				

a Number of animals examined microscopically at site and number of animals with lesion
 b Primary tumors: all tumors except metastatic tumors

NTP Experiment-Test: 88138-03 INCIDENCE RATES OF NEOPLASMS BY ANATOMIC SITE (SYSTEMIC LESIONS ABRIDGED) (a)
 Study Type: CHRONIC BENZOPHENONE
 Route: DOSED FEED

Report: PEIRPT05
 Date: 07/21/03
 Time: 15:18:50

FISCHER 344 RATS MALE 0 PPM 312 PPM 625 PPM 1250 PPM

DISPOSITION SUMMARY

Animals Initially in Study	50	50	50	50
Early Deaths				
Moribund Sacrifice	25	12	16	44
Natural Death	3	11	3	4
Survivors				
Terminal Sacrifice	22	27	31	2
Animals Examined Microscopically	50	50	50	50

ALIMENTARY SYSTEM

Esophagus	(50)	(50)	(50)	(50)
Intestine Large, Colon	(50)	(50)	(50)	(50)
Intestine Large, Rectum	(50)	(50)	(50)	(50)
Leiomyoma			1 (2%)	
Intestine Large, Cecum	(50)	(50)	(50)	(50)
Intestine Small, Duodenum	(50)	(50)	(50)	(50)
Intestine Small, Jejunum	(50)	(50)	(50)	(50)
Intestine Small, Ileum	(50)	(50)	(50)	(50)
Liver	(50)	(50)	1 (2%)	(50)
Hepatocellular Carcinoma			1 (2%)	
Hepatocellular Adenoma	2 (4%)	(12)	1 (2%)	(4)
Mesentery	(9)	(8)	(8)	(7)
Oral Mucosa	(8)	1 (13%)	(5)	(4)
Gingival, Squamous Cell Papilloma				1 (14%)
Pharyngeal, Squamous Cell Papilloma				(50)
Pancreas	(50)	(50)	(50)	(49)
Mixed Tumor Benign	1 (2%)	(50)	(50)	(49)
Salivary Glands	(49)	(50)	(50)	(50)
Schwannoma Malignant	1 (2%)	(49)	(49)	(50)
Stomach, Fore stomach	(50)	(50)	(49)	(50)
Stomach, Glandular	(50)	(1)	(1)	(1)
Tongue	(1)	1 (100%)	1 (100%)	1 (100%)
Squamous Cell Papilloma	1 (100%)	(5)	(2)	(3)
Tooth	(3)			

FISCHER 344 RATS MALE

0 PPM

312 PPM

625 PPM

1250 PPM

CARDIOVASCULAR SYSTEM

Blood Vessel	(50)	(50)	(50)	(50)
Heart	(50)	(50)	(50)	(50)
Chordoma, Metastatic, Bone	1 (2%)			
Schwannoma Malignant	1 (2%)			

ENDOCRINE SYSTEM

Adrenal Cortex	(50)	(49)	(50)	(50)
Adenoma		1 (2%)		
Carcinoma		1 (2%)		
Adrenal Medulla	(50)	(49)	(50)	(50)
Pheochromocytoma Malignant			2 (4%)	1 (2%)
Bilateral, Pheochromocytoma Benign	8 (16%)	5 (10%)	6 (12%)	3 (6%)
Islets, Pancreatic			2 (4%)	
Adenoma	(50)	(50)	(50)	(50)
Parathyroid Gland	1 (2%)	(50)	1 (2%)	(50)
Pituitary Gland	(49)	(45)	(48)	(49)
Pars Distalis, Adenoma	(50)	(50)	(50)	(50)
Thyroid Gland	10 (20%)	6 (12%)	12 (24%)	5 (10%)
Bilateral, C-Cell, Adenoma	(50)	(50)	(50)	(50)
C-Cell, Adenoma	10 (20%)	6 (12%)	3 (6%)	4 (8%)
C-Cell, Carcinoma	1 (2%)	2 (4%)	6 (12%)	1 (2%)
Follicular Cell, Adenoma	2 (4%)	2 (4%)	3 (6%)	3 (6%)

GENERAL BODY SYSTEM

Peritoneum

(1)

(1)

GENITAL SYSTEM

Epididymis	(50)	(50)	(50)	(50)
Preputial Gland	(50)	(50)	(50)	(49)
Adenoma		3 (6%)	1 (2%)	1 (2%)
Carcinoma	1 (2%)	3 (6%)	3 (6%)	1 (2%)
Prostate	(50)	(50)	(50)	(50)
Seminal Vesicle	(50)	(50)	(50)	(49)
Testes	(50)	(50)	(50)	(50)
Bilateral, Interstitial Cell, Adenoma	43 (86%)	41 (82%)	40 (80%)	42 (84%)

NTP Experiment-Test: 88138-03 INCIDENCE RATES OF NEOPLASMS BY ANATOMIC SITE (SYSTEMIC LESIONS ABRIDGED) (a)
 Study Type: CHRONIC BENZOPHENONE
 Route: DOSED FEED

Report: PEIRPT05
 Date: 07/21/03
 Time: 15:18:50

FISCHER 344 RATS MALE

0 PPM

312 PPM

625 PPM

1250 PPM

GENITAL SYSTEM - cont
 Interstitial Cell, Adenoma

2 (4%) 5 (10%) 6 (12%) 6 (12%)

HEMATOPOIETIC SYSTEM

Bone Marrow
 Lymph Node
 Lymph Node, Mandibular
 Lymph Node, Mesenteric
 Chordoma, Metastatic, Bone
 Spleen
 Thymus
 Chordoma, Metastatic, Bone

(50) (49) (50) (50)
 (19) (20) (16) (19)
 (5) (1) (2) (2)
 (50) (50) (50) (50)
 1 (2%)
 (50) (50) (50) (50)
 (48) (48) (48) (48)
 1 (2%)

INTEGUMENTARY SYSTEM

Mammary Gland
 Fibroadenoma
 Pheochromocytoma Malignant, Metastatic,
 Adrenal Medulla
 Skin
 Basal Cell Adenoma
 Fibrous Histiocytoma
 Keratoacanthoma
 Osteosarcoma
 Squamous Cell Malignant
 Squamous Cell Papilloma
 Trichoepithelioma
 Subcutaneous Tissue, Fibroma

(50) (48) (50) (50)
 2 (4%) 2 (4%) 1 (2%) 1 (2%)
 (50) (50) (50) (50)
 1 (2%) 1 (2%) 1 (2%) 1 (2%)
 10 (20%) 3 (6%) 3 (6%) 3 (6%)
 1 (2%) 2 (4%) 2 (4%) 2 (4%)
 1 (2%) 2 (4%) 2 (4%) 2 (4%)
 1 (2%) 3 (6%) 3 (6%) 3 (6%)
 5 (10%) 3 (6%) 1 (2%) 2 (4%)

MUSCULOSKELETAL SYSTEM

Bone
 Chordoma
 Osteosarcoma
 Skeletal Muscle

(50) (50) (50) (50)
 1 (2%) 1 (2%) 1 (2%) 1 (2%)
 (2) (2) (1) (1)

BENZOPHENONE

FISCHER 344 RATS MALE		0 PPM	312 PPM	625 PPM	1250 PPM
NERVOUS SYSTEM					
Brain	(50)	(50)	(50)	(50)	(50)
RESPIRATORY SYSTEM					
Lung	(50)	(49)	(50)	(50)	(50)
Alveolar/Bronchiolar Adenoma	4 (8%)	1 (2%)	1 (2%)	2 (4%)	
Alveolar/Bronchiolar Carcinoma					
Carcinoma, Metastatic, Thyroid Gland		1 (2%)	1 (2%)		
Carcinoma, Metastatic, Adrenal Cortex		1 (2%)			
Chordoma, Metastatic, Bone	1 (2%)				
Osteosarcoma, Metastatic, Skin		2 (4%)			
Pheochromocytoma Malignant, Metastatic, Adrenal Medulla			2 (4%)	1 (2%)	1 (2%)
Mediastinum, Myxosarcoma				1 (2%)	1 (2%)
Nose	(50)	(50)	(50)	(50)	(50)
Trachea	(50)	(50)	(50)	(50)	(50)
SPECIAL SENSES SYSTEM					
Eye	(50)	(50)	(50)	(50)	(50)
Harderian Gland	(50)	(50)	(50)	(50)	(50)
URINARY SYSTEM					
Kidney	(50)	(50)	(50)	(50)	(50)
Pelvis, Transitional Epithelium, Carcinoma	1 (2%)	1 (2%)	2 (4%)	1 (2%)	1 (2%)
Renal Tubule, Adenoma		1 (2%)		4 (8%)	
Renal Tubule, Carcinoma		1 (2%)			
Urinary Bladder	(50)	(50)	(50)	(50)	(50)
SYSTEMIC LESIONS					
Multiple Organs	* (50)	* (50)	* (50)	* (50)	* (50)
Leukemia Mononuclear	27 (54%)	41 (82%)	39 (78%)	24 (48%)	
Mesothelioma Malignant	2 (4%)	3 (6%)	2 (4%)		

* Number of animals with any tissue examined microscopically

NTP Experiment-Test: 88138-03 INCIDENCE RATES OF NEOPLASMS BY ANATOMIC SITE (SYSTEMIC LESIONS ABRIDGED) (a)
 Study Type: CHRONIC BENZOPHENONE
 Route: DOSED FEED

Report: PEIRPT05
 Date: 07/21/03
 Time: 15:18:50

FISCHER 344 RATS MALE

0 PPM

312 PPM

625 PPM

1250 PPM

TUMOR SUMMARY

Total Animals with Primary Neoplasms (b)	50	50	50	50
Total Primary Neoplasms	139	139	143	109
Total Animals with Benign Neoplasms	49	47	49	50
Total Benign Neoplasms	103	86	92	77
Total Animals with Malignant Neoplasms	33	42	40	26
Total Malignant Neoplasms	36	53	51	32
Total Animals with Metastatic Neoplasms	2	5	4	1
Total Metastatic Neoplasms	9	12	6	1
Total Animals with Malignant Neoplasms Uncertain Primary Site				
Total Animals with Neoplasms Uncertain-Benign or Malignant				
Total Uncertain Neoplasms				

a Number of animals examined microscopically at site and number of animals with lesion
 b Primary tumors: all tumors except metastatic tumors

NTP Experiment-Test: 88138-03
Study Type: CHRONIC
Route: DOSED FEED

INCIDENCE RATES OF NONNEOPLASTIC LESIONS BY ANATOMIC SITE (a)
WITH AVERAGE SEVERITY GRADES [b]
BENZOPHENONE

Report: PEIRP118
Date: 07/21/03
Time: 16:01:01

FINAL #1 RATS

Facility: Battelle Columbus Laboratory
Chemical CAS #: 119-61-9
Lock Date: 04/26/02
Cage Range: All
Reasons For Removal: All
Removal Date Range: All
Treatment Groups: Include All

- a Number of animals examined microscopically at site and number of animals with lesion
- b Average severity grade (1-minimal;2-mild;3-moderate;4-marked)

NTP Experiment-Test: 88138-03
 Study Type: CHRONIC
 Route: DOSED FEED

INCIDENCE RATES OF NONNEOPLASTIC LESIONS BY ANATOMIC SITE (a)
 WITH AVERAGE SEVERITY GRADES (b)
 BENZOPHENONE

Report: PEIRPT18
 Date: 07/21/03
 Time: 16:01:01

FISCHER 344 RATS FEMALE

0 PPM 312 PPM 625 PPM 1250 PPM

DISPOSITION SUMMARY

Animals Initially In Study 50
 Early Deaths 16
 Moribund Sacrifice 2
 Natural Death 32
 Survivors 38
 Terminal Sacrifice 37

Animals Examined Microscopically

50 50 50 50

ALIMENTARY SYSTEM

Esophagus	(50)	(50)	(50)	(50)
Inflammation		1 [2.0]		
Periesophageal Tissue, Necrosis, Fatty		1 [2.0]		
Intestine Large, Colon	(50)	(50)	(50)	(50)
Inflammation		1 [2.0]		
Metaplasia, Mucous		3 [1.0]		
Parasite Metazoan		(50)		
Intestine Large, Rectum	(50)	8 [1.1]	14 [1.2]	6 [1.0]
Parasite Metazoan		1 [3.0]		
Ulcer	(50)	(50)	(50)	(50)
Intestine Large, Cecum		1 [3.0]		
Inflammation		(50)		
Mineralization	(50)	(50)	1 [1.0]	(50)
Intestine Small, Duodenum		1 [2.0]		
Hyperplasia	(50)	(50)	(50)	(50)
Intestine Small, Jejunum		1 [2.0]		
Inflammation		(50)		
Liver	(50)	(50)	(50)	(50)
Angiectasis		2 [1.0]		
Basophilic Focus		48	41	43
Clear Cell Focus		15	13	10
Degeneration, Cystic		1 [1.0]		
Eosinophilic Focus		6	3 [1.7]	9
Fatty Change, Diffuse		8 [2.1]		
Fibrosis		11 [1.5]		
Hematopoietic Cell Proliferation		6 [1.2]		
Hepatodiphagmatic Nodule		5	6	6
Inflammation, Chronic Active		46 [1.5]	38 [1.5]	29 [1.3]
Mixed Cell Focus		10	11	5
Necrosis		12 [1.1]	6 [1.3]	11 [1.7]

a Number of animals examined microscopically at site and number of animals with lesion
 b Average severity grade (1-minimal;2-mild;3-moderate;4-marked)

NTP Experiment-Test: 88138-03
 Study Type: CHRONIC
 Route: DOSED FEED

INCIDENCE RATES OF NONNEOPLASTIC LESIONS BY ANATOMIC SITE (a)
 WITH AVERAGE SEVERITY GRADES [b]
 BENZOPHENONE

Report: PEIRPT18
 Date: 07/21/03
 Time: 16:01:01

FISCHER 344 RATS FEMALE 0 PPM 312 PPM 625 PPM 1250 PPM

ALIMENTARY SYSTEM - CONT

Bile Duct, Cyst	10 [1.3]	35 [1.2]	39 [1.4]	1
Bile Duct, Hyperplasia		27 [1.0]	30 [1.3]	40 [1.6]
Hepatocyte, Centrilobular, Hypertrophy				33 [2.0]
Oval Cell, Hyperplasia				3 [2.0]
Mesentery	(12)	(18)	(10)	(6)
Fat, Necrosis	11 [1.4]	18 [2.0]	10 [1.8]	4 [2.0]
Oral Mucosa	(4)	(8)	(4)	(4)
Hyperplasia, Squamous				1 [2.0]
Gingival, Inflammation	4 [1.5]	7 [1.1]	4 [1.0]	4 [1.3]
Pancreas	(50)	(50)	(50)	(50)
Basophilic Focus				1 [1.0]
Inflammation	12 [1.2]	3 [1.0]	2 [1.0]	6 [1.0]
Acinus, Atrophy	17 [1.2]	10 [1.0]	11 [1.5]	12 [1.5]
Salivary Glands	(50)	(50)	(50)	(50)
Atrophy	2 [1.0]	1 [1.0]	1 [1.0]	1 [2.0]
Basophilic Focus	1 [1.0]	1 [1.0]	1 [1.0]	1 [2.0]
Inflammation				1 [2.0]
Stomach, Forestomach	(50)	(50)	(50)	(50)
Hyperplasia, Squamous	2 [2.0]	2 [2.5]	2 [2.0]	4 [2.3]
Inflammation	4 [1.3]	2 [1.5]	2 [1.5]	3 [2.3]
Ulcer				1 [2.0]
Stomach, Glandular	(50)	(50)	(50)	(50)
Erosion				1 [2.0]
Inflammation				1 [2.0]
Mineralization				2 [1.5]
Ulcer				2 [1.0]
Epithelium, Atrophy	1 [1.0]	2 [1.0]	1 [2.0]	1 [3.0]
Tooth				1 [3.0]
Inflammation				3 [2.0]

CARDIOVASCULAR SYSTEM

Blood Vessel	(50)	(50)	(50)	(50)
Mineralization	(50)	(50)	(50)	(50)
Heart	46 [1.3]	46 [1.4]	48 [1.3]	46 [1.4]
Cardiomyopathy				1 [3.0]
Atrium, Thrombosis				1 [3.0]

ENDOCRINE SYSTEM

Adrenal Cortex	(50)	(50)	(50)	(50)
----------------	------	------	------	------

a Number of animals examined microscopically at site and number of animals with lesion
 b Average severity grade (1-minimal;2-mild;3-moderate;4-marked)

NTP Experiment-Test: 88138-03
 Study Type: CHRONIC
 Route: DOSED FEED

INCIDENCE RATES OF NONNEOPLASTIC LESIONS BY ANATOMIC SITE (a)
 WITH AVERAGE SEVERITY GRADES^(b)
 BENZOPHENONE

Report: PEIRPT18
 Date: 07/21/03
 Time: 16:01:01

FISCHER 344 RATS FEMALE

0 PPM 312 PPM 625 PPM 1250 PPM

ENDOCRINE SYSTEM - CONT	0 PPM	312 PPM	625 PPM	1250 PPM
Angiectasis	42 [1.4]	36 [1.1]	18 [1.0]	24 [1.0]
Atrophy	1 [1.0]			1 [2.0]
Degeneration, Cystic	3 [1.0]	2 [1.0]	2 [1.0]	
Hematopoietic Cell Proliferation	3 [1.0]	1 [1.0]	2 [1.0]	2 [1.0]
Hyperplasia	6 [1.2]	10 [1.1]	6 [2.0]	6 [1.2]
Hypertrophy	7 [1.0]	5 [1.4]	5 [1.0]	8 [1.0]
Karyomegaly	1 [1.0]			
Necrosis	5 [1.4]	7 [1.4]	5 [1.4]	2 [2.5]
Vacuolization Cytoplasmic	14 [1.3]	16 [1.4]	15 [1.7]	20 [1.3]
Adrenal Medulla	(50)	(50)	(50)	(50)
Hyperplasia	2 [2.0]	1 [1.0]	2 [2.5]	
Necrosis	1 [1.0]			
Vacuolization Cytoplasmic	(47)	(48)	(44)	(48)
Parathyroid Gland		1 [1.0]		1 [2.0]
Hyperplasia	(50)	(50)	(50)	(50)
Pituitary Gland	30 [2.2]	30 [2.3]	23 [2.3]	23 [2.0]
Angiectasis	2 [1.0]	1 [2.0]	1 [1.0]	2 [2.0]
Cyst	23 [2.2]	24 [2.5]	20 [2.8]	18 [1.9]
Hyperplasia	1 [1.0]			
Inflammation	(50)	(50)	(50)	(50)
Thyroid Gland	34 [1.8]	11 [1.8]	13 [1.7]	8 [1.9]
C-Cell, Hyperplasia	1 [2.0]		1 [1.0]	1 [2.0]
Follicle, Cyst				
Follicle, Hyperplasia		2 [1.0]		
Follicular Cell, Hyperplasia			1 [2.0]	

GENERAL BODY SYSTEM

None

GENITAL SYSTEM

Clitoral Gland	(50)	(50)	(50)	(50)
Atrophy				
Cyst	3 [2.3]	2 [2.5]	1 [4.0]	
Hyperplasia	6 [2.2]	1 [2.0]	2 [2.5]	
Hyperplasia, Squamous				1 [2.0]
Inflammation	2 [3.0]	2 [2.5]	2 [3.0]	
Metaplasia, Squamous	1 [2.0]			
Ovary	(50)	(50)	(50)	(50)
Cyst	6	13	10	9

a Number of animals examined microscopically at site and number of animals with lesion
 b Average severity grade (1-minimal;2-mild;3-moderate;4-marked)

NTP Experiment-Test: 88138-03
 Study Type: CHRONIC
 Route: DOSED FEED

INCIDENCE RATES OF NONNEOPLASTIC LESIONS BY ANATOMIC SITE (a)
 WITH AVERAGE SEVERITY GRADES [b]
 BENZOPHENONE

Report: PEIRPT18
 Date: 07/21/03
 Time: 16:01:01

FISCHER 344 RATS FEMALE

0 PPM

312 PPM

625 PPM

1250 PPM

GENITAL SYSTEM - CONT		0 PPM	312 PPM	625 PPM	1250 PPM
Uterus	Interstitial Cell, Hyperplasia	(50)	1 [2.0] (50)	(50)	(50)
Uterus	Angiectasis, Focal				1 [2.0]
Uterus	Inflammation				1 [2.0]
Uterus	Cervix, Hypertrophy				1 [3.0]
Uterus	Endometrium, Hyperplasia, Cystic	12 [1.8]	20 [1.9]	20 [2.2]	20 [2.3]
Uterus	Endometrium, Hyperplasia, Adenomatous	1 [2.0]	1 [3.0]		1 [3.0]
Uterus	Serosa, Inflammation, Granulomatous		2 [1.0]		
Vagina	Inflammation		(1)	(1)	1 [2.0]

HEMATOPOIETIC SYSTEM

Bone Marrow	Inflammation, Granulomatous	(50)	(50)	(50)	(50)
Bone Marrow	Myelofibrosis	1 [2.0]	1 [2.0]	1 [1.0]	1 [1.0]
Bone Marrow	Necrosis	2 [1.0]		2 [1.5]	6 [1.5]
Bone Marrow	Erythroid Cell, Hyperplasia			1 [2.0]	1 [2.0]
Bone Marrow	Myeloid Cell, Hyperplasia	8 [1.1]	6 [1.0]	7 [1.9]	2 [1.5]
Bone Marrow	Lymph Node	11 [1.7]	13 [2.5]	20 [2.5]	13 [2.6]
Bone Marrow	Axillary, Right, Ectasia	(8)	(8)	(11)	(12)
Bone Marrow	Axillary, Right, Infiltration Cellular, Plasma Cell			1 [3.0]	
Bone Marrow	Deep Cervical, Ectasia	1 [1.0]		1 [4.0]	
Bone Marrow	Deep Cervical, Hemorrhage	1 [2.0]			
Bone Marrow	Deep Cervical, Infiltration Cellular, Plasma Cell	3 [1.7]			2 [1.5]
Bone Marrow	Deep Cervical, Infiltration Cellular, Histiocyte	3 [1.7]			
Bone Marrow	Mediastinal, Hemorrhage				2 [3.0]
Bone Marrow	Mediastinal, Infiltration Cellular, Plasma Cell	2 [1.5]	1 [2.0]	4 [2.3]	2 [2.0]
Bone Marrow	Mediastinal, Infiltration Cellular, Histiocyte				1 [1.0]
Bone Marrow	Pancreatic, Hemorrhage				2 [2.0]
Bone Marrow	Pancreatic, Infiltration Cellular, Histiocyte				3 [2.3]
Bone Marrow	Pancreatic, Pigmentation, Hemosiderin				2 [3.0]
Bone Marrow	Renal, Infiltration Cellular, Histiocyte				1 [3.0]
Bone Marrow	Renal, Pigmentation				1 [2.0]
Bone Marrow	Lymph Node, Mesenteric	(50)	(50)	(50)	(50)
Bone Marrow	Infiltration Cellular, Plasma Cell	50 [1.6]	1 [2.0]	1 [2.0]	2 [2.0]
Bone Marrow	Infiltration Cellular, Histiocyte		49 [1.4]		49 [1.4]

a Number of animals examined microscopically at site and number of animals with lesion
 b Average severity grade (1-minimal;2-mild;3-moderate;4-marked)

NTP Experiment-Test: 88138-03
 Study Type: CHRONIC
 Route: DOSED FEED

INCIDENCE RATES OF NONNEOPLASTIC LESIONS BY ANATOMIC SITE (a)
 WITH AVERAGE SEVERITY GRADES(b)
 BENZOPHENONE

Report: PEIRPT18
 Date: 07/21/03
 Time: 16:01:01

FISCHER 344 RATS FEMALE

0 PPM 312 PPM 625 PPM 1250 PPM

HEMATOPOIETIC SYSTEM - CONT	0 PPM	312 PPM	625 PPM	1250 PPM
Spleen	(49)	(50)	(50)	(50)
Accessory Spleen			1 [1.4]	1 [2.0]
Autolysis			2	
Fibrosis	1 [3.0]			1 [1.0]
Hematopoietic Cell Proliferation	47 [1.1]	45 [1.0]	40 [1.2]	45 [1.1]
Hyperplasia, Lymphoid		1 [2.0]	1 [3.0]	2 [2.5]
Infarct	1 [4.0]			
Inflammation, Granulomatous	1 [2.0]	1 [4.0]	49 [1.0]	49 [1.0]
Pigmentation, Hemosiderin	48 [1.1]	50 [1.0]		
Lymphoid Follicle, Atrophy		5 [1.6]		
Red Pulp, Hyperplasia				
Thymus	(50)	(49)	(46)	1 [2.0]
Atrophy	49 [3.3]	48 [3.4]	44 [3.4]	(50)
Cyst				49 [3.3]
				1 [1.0]

INTEGUMENTARY SYSTEM

Mammary Gland	(50)	(50)	(50)	(50)
Atrophy				1 [3.0]
Galactocele	7	3	2	
Hyperplasia	3 [1.0]	4 [2.0]	1 [3.0]	3 [2.0]
Inflammation	1 [3.0]	1 [1.0]	1 [2.0]	
Skin	(50)	(50)	(50)	(50)
Cyst Epithelial Inclusion			1	1
Sebaceous Gland, Hyperplasia				1 [3.0]
Subcutaneous Tissue, Necrosis			1 [2.0]	

MUSCULOSKELETAL SYSTEM

Bone	(50)	(50)	(50)	(50)
Fibrous Osteodystrophy				2 [1.0]
Skeletal Muscle	(1)	(1)	(3)	(1)
Inflammation	1 [3.0]	1 [1.0]		

NERVOUS SYSTEM

Brain	(50)	(50)	(50)	(50)
Gliosis			1 [1.0]	
Hemorrhage	2 [3.0]	1 [1.0]		
Hydrocephalus	1 [3.0]			

a Number of animals examined microscopically at site and number of animals with lesion
 b Average severity grade (1-minimal;2-mild;3-moderate;4-marked)

NTP Experiment-Test: 88138-03
 Study Type: CHRONIC
 Route: DOSED FEED

INCIDENCE RATES OF NONNEOPLASTIC LESIONS BY ANATOMIC SITE (a)
 WITH AVERAGE SEVERITY GRADES [b]
 BENZOPHENONE

Report: PEIRPT18
 Date: 07/21/03
 Time: 16:01:01

FISCHER 344 RATS FEMALE 0 PPM 312 PPM 625 PPM 1250 PPM

NERVOUS SYSTEM - CONT	0 PPM	312 PPM	625 PPM	1250 PPM
Inflammation	1 [1.0]	1 [1.0]	1 [1.0]	1 [2.0]
Mineralization	1 [2.0]	1 [1.0]	1 [1.0]	1 [2.0]
Necrosis				

RESPIRATORY SYSTEM

Lung	(50)	(50)	(50)	(50)
Inflammation, Acute		2 [1.0]	1 [2.0]	
Inflammation, Granulomatous	12 [1.1]	5 [1.0]	9 [1.4]	7 [1.4]
Metaplasia, Squamous			1 [1.0]	
Alveolar Epithelium, Hyperplasia	18 [1.5]	18 [1.4]	13 [1.2]	15 [1.3]
Alveolus, Infiltration Cellular, Histiocyte	50 [2.0]	50 [2.0]	50 [2.0]	50 [1.9]
Interstitialium, Fibrosis		1 [3.0]		
Nose	(50)	(50)	(50)	(50)
Inflammation	2 [2.5]	1 [1.0]	3 [1.3]	1 [1.0]
Thrombosis			2 [2.0]	
Trachea	(50)	(50)	(50)	(50)
Inflammation		4 [1.3]	2 [1.0]	1 [1.0]

SPECIAL SENSES SYSTEM

Eye	(50)	(50)	(50)	(50)
Inflammation	1 [1.0]	1 [3.0]	2 [2.0]	1 [1.0]
Lens, Cataract	1 [3.0]	1 [2.0]	2 [1.5]	2 [3.5]
Optic Nerve, Fibrosis				1 [2.0]
Retina, Degeneration	2 [2.5]	2 [2.5]	4 [3.0]	4 [3.0]
Retina, Dysplasia		1 [2.0]		
Harderian Gland	(50)	(50)	(50)	(50)
Infiltration Cellular, Lymphoid	14 [1.0]	10 [1.0]	6 [1.0]	9 [1.1]

URINARY SYSTEM

Kidney	(50)	(50)	(50)	(50)
Accumulation, Hyaline Droplet			2 [2.5]	1 [4.0]
Fibrosis	1 [4.0]	1	2	1
Infarct				
Inflammation, Chronic Active	1 [2.0]	49 [1.4]	48 [1.7]	49 [2.0]
Nephropathy	47 [1.1]			1 [2.0]
Cortex, Inflammation		1 [1.0]	4 [1.0]	1 [1.0]
Cortex, Mineralization	2 [1.0]			

a Number of animals examined microscopically at site and number of animals with lesion
 b Average severity grade (1-minimal;2-mild;3-moderate;4-marked)

NTP Experiment-Test: 88138-03
 Study Type: CHRONIC
 Route: DOSED FEED

INCIDENCE RATES OF NONNEOPLASTIC LESIONS BY ANATOMIC SITE (a)
 WITH AVERAGE SEVERITY GRADES [b]
 BENZOPHENONE

Report: PEIRPT18
 Date: 07/21/03
 Time: 16:01:01

FISCHER 344 RATS FEMALE

0 PPM

312 PPM

625 PPM

1250 PPM

URINARY SYSTEM - CONT

Medulla, Fibrosis	1 [2.0]	49 [1.1]	49 [1.1]	46 [1.1]
Medulla, Mineralization	43 [1.0]	2 [1.5]	4 [1.8]	2 [1.5]
Pelvis, Inflammation	1 [3.0]	1 [1.0]	2 [2.0]	4 [1.0]
Pelvis, Transitional Epithelium, Hyperplasia	1 [1.0]	1 [4.0]	1 [3.0]	1 [4.0]
Renal Tubule, Cyst		1 [2.0]	1 [3.0]	1 [2.0]
Renal Tubule, Hyperplasia		(50)	(50)	(50)
Renal Tubule, Pigmentation		1 [3.0]	1 [3.0]	
Renal Tubule, Vacuolization		1 [1.0]		
Urinary Bladder		1 [1.0]		
Hyperplasia				
Inflammation				

a Number of animals examined microscopically at site and number of animals with lesion
 b Average severity grade (1-minimal;2-mild;3-moderate;4-marked)

NTP Experiment-Test: 88138-03
 Study Type: CHRONIC
 Route: DOSED FEED

INCIDENCE RATES OF NONNEOPLASTIC LESIONS BY ANATOMIC SITE (a)
 WITH AVERAGE SEVERITY GRADES [b]
 BENZOPHENONE

Report: PEIRPT18
 Date: 07/21/03
 Time: 16:01:01

FISCHER 344 RATS MALE

0 PPM 312 PPM 625 PPM 1250 PPM

DISPOSITION SUMMARY

Animals Initially In Study	50	50	50	50
Early Deaths	25	12	16	44
Morbund Sacrifice	3	11	3	4
Natural Death				
Survivors	22	27	31	2
Terminal Sacrifice				
Animals Examined Microscopically	50	50	50	50

ALIMENTARY SYSTEM

Intestine Large, Colon	(50)	(50)	(50)	(50)
Erosion			1 [2.0]	(50)
Inflammation			1 [2.0]	(50)
Parasite Metazoan	1 [1.0]	1 [1.0]	1 [1.0]	(50)
Intestine Large, Rectum	(50)	(50)	8 [1.0]	(50)
Parasite Metazoan	6 [1.0]	6 [1.2]	5 [1.0]	(50)
Intestine Large, Cecum	(50)	(50)	1 [1.0]	(50)
Erosion	1 [2.0]		1 [4.0]	4 [3.0]
Inflammation			2 [2.0]	1 [3.0]
Mineralization				
Ulcer				
Intestine Small, Duodenum	(50)	(50)	(50)	(50)
Peyer's Patch, Hyperplasia, Lymphoid		1 [3.0]	(50)	(50)
Liver	(50)	(50)	(50)	(50)
Angiectasis	24	25	32	19
Basophilic Focus	19	19	18	
Clear Cell Focus				
Congestion	1 [2.0]	11 [1.0]	20 [1.3]	15 [1.2]
Degeneration, Cystic	8 [1.3]	14	10	9
Eosinophilic Focus	5	20 [1.7]	22 [1.5]	15 [1.7]
Fatty Change, Diffuse	22 [2.3]	4 [1.3]	2 [1.0]	4 [1.0]
Hematopoietic Cell Proliferation	4 [1.3]	6	1	1
Hepatodiaphragmatic Nodule	2			
Infarct				
Inflammation, Chronic Active	22 [1.9]	21 [1.6]	35 [1.9]	33 [1.8]
Inflammation, Granulomatous	1 [4.0]			2 [2.5]
Mineralization				1 [1.0]
Mixed Cell Focus	9	17	22	4
Necrosis	19 [1.5]	19 [1.6]	9 [1.7]	14 [1.7]
Bile Duct, Cyst	1			

a Number of animals examined microscopically at site and number of animals with lesion
 b Average severity grade (1-minimal;2-mild;3-moderate;4-marked)

NTP Experiment-Test: 88138-03
 Study Type: CHRONIC
 Route: DOSED FEED

INCIDENCE RATES OF NONNEOPLASTIC LESIONS BY ANATOMIC SITE (a)
 WITH AVERAGE SEVERITY GRADES (b)
 BENZOPHENONE

Report: PEIRPT18
 Date: 07/21/03
 Time: 16:01:01

FISCHER 344 RATS MALE

0 PPM 312 PPM 625 PPM 1250 PPM

ALIMENTARY SYSTEM - CONT	0 PPM	312 PPM	625 PPM	1250 PPM
Bile Duct, Hyperplasia	49 [2.1]	46 [2.1]	48 [2.1]	50 [1.5]
Hepatocyte, Multinucleated	1 [1.0]		1 [1.0]	19 [1.5]
Hepatocyte, Centrilobular, Hypertrophy		17 [1.3]	31 [1.8]	1 [1.0]
Hepatocyte, Centrilobular, Necrosis				1 [2.0]
Vein, Inflammation				(4)
Mesentery	(9)	(12)	(8)	
Inflammation	1 [2.0]		1 [2.0]	1 [1.0]
Fat, Necrosis	7 [2.3]	7 [1.9]	7 [2.0]	3 [2.0]
Oral Mucosa	(8)	(8)	(5)	(7)
Gingival, Hyperplasia			1 [4.0]	
Gingival, Inflammation	8 [1.0]	6 [1.0]	5 [1.8]	5 [1.2]
Pharyngeal, Inflammation				1 [1.0]
Pancreas	(50)	(50)	(50)	(50)
Basophilic Focus		1 [3.0]		
Cyst				3 [1.0]
Inflammation	14 [1.5]	16 [1.2]	6 [1.0]	9 [1.0]
Metaplasia, Hepatocyte				1 [1.0]
Acinus, Atrophy	20 [1.3]	21 [1.1]	22 [1.3]	10 [1.2]
Acinus, Hyperplasia	1 [3.0]			
Salivary Glands	(49)	(50)	(50)	(49)
Atrophy	1 [1.0]	1 [1.0]	3 [1.3]	
Inflammation		2 [3.0]		
Stomach, Fore stomach	(50)	(49)	(49)	(50)
Autolysis		1		
Hyperplasia, Squamous	7 [2.0]	4 [1.8]	10 [2.4]	17 [2.6]
Inflammation	8 [2.0]	6 [2.0]	8 [3.4]	12 [2.6]
Mineralization		1 [1.0]	1 [2.0]	3 [2.7]
Ulcer	4 [2.5]	1 [1.0]	8 [3.1]	8 [3.0]
Stomach, Glandular	(50)	(50)	(49)	(50)
Erosion	5 [1.4]	2 [2.0]	3 [1.7]	3 [2.3]
Hyperplasia			1 [2.0]	
Inflammation	5 [2.2]	5 [1.8]	4 [1.8]	7 [1.7]
Mineralization			5 [2.6]	15 [2.7]
Ulcer	1 [3.0]		1 [3.0]	4 [2.3]
Tooth	(3)		(2)	(3)
Inflammation	1 [1.0]	(5)	1 [1.0]	1 [1.0]

CARDIOVASCULAR SYSTEM

Blood Vessel	(50)	(50)	(50)	(50)
Inflammation			1 [1.0]	
Mineralization		1 [1.0]		11 [3.1]

a Number of animals examined microscopically at site and number of animals with lesion
 b Average severity grade (1-minimal;2-mild;3-moderate;4-marked)

NTP Experiment-Test: 88138-03
 Study Type: CHRONIC
 Route: DOSED FEED

INCIDENCE RATES OF NONNEOPLASTIC LESIONS BY ANATOMIC SITE (a)
 WITH AVERAGE SEVERITY GRADES [b]
 BENZOPHENONE

Report: PEIRP118
 Date: 07/21/03
 Time: 16:01:01

FISCHER 344 RATS MALE

0 PPM

312 PPM

625 PPM

1250 PPM

CARDIOVASCULAR SYSTEM - CONT					
Pulmonary Artery, Pulmonary Vein, Hypertrophy	(50)	(50)	1 [2.0]	(50)	
Heart	48 [1.9]	48 [2.0]	47 [2.1]	49 [1.9]	
Cardiomyopathy			2 [1.5]	6 [2.3]	
Mineralization					
Aorta, Tunic, Media, Mineralization			2 [1.5]		
Atrium, Thrombosis	3 [3.0]	1 [1.0]		1 [1.0]	
Endocardium, Hyperplasia		5 [2.2]			
Valve, Thrombosis		2 [4.0]			
		1 [2.0]			

ENDOCRINE SYSTEM

Adrenal Cortex	(50)	(49)	(50)	(50)	
Angiectasis	4 [1.0]	4 [1.3]	2 [1.5]	1 [1.0]	
Atrophy		1 [3.0]			
Cytoplasmic Alteration	1 [2.0]				
Degeneration, Cystic	1 [1.0]		2 [1.0]	4 [1.3]	
Hematopoietic Cell Proliferation	5 [1.0]		11 [1.2]	3 [1.0]	
Hyperplasia	1 [1.0]	4 [1.3]	3 [2.0]	1 [1.0]	
Hypertrophy	8 [1.4]	2 [1.0]		27 [1.4]	
Necrosis	1 [4.0]	4 [1.8]		1 [1.0]	
Vacuolization Cytoplasmic	27 [1.6]	27 [1.7]	31 [1.4]	(50)	
Adrenal Medulla	(50)	(49)	(50)	(50)	
Angiectasis		1 [1.0]	11 [2.1]	5 [1.8]	
Hyperplasia	6 [2.5]	8 [2.1]	(50)	(50)	
Islets, Pancreatic	(50)	(50)			
Hyperplasia	1 [2.0]	(45)	(48)	(49)	
Parathyroid Gland	(49)	1 [1.0]	19 [2.0]	32 [2.2]	
Hyperplasia	2 [1.5]	(50)	(50)	(50)	
Pituitary Gland	(50)	10 [2.0]	11 [2.2]	3 [1.7]	
Angiectasis	4 [2.0]	3 [1.0]	1 [1.0]	5 [1.0]	
Cyst	6 [1.0]	21 [2.3]	12 [1.8]	13 [1.8]	
Hyperplasia	16 [2.1]	1 [2.0]		1 [1.0]	
Inflammation		1 [2.0]			
Pigmentation, Hemosiderin		(50)	(50)	(50)	
Thyroid Gland	(50)				
Infiltration Cellular, Mononuclear Cell	1 [1.0]		2 [1.5]	1 [1.0]	
Ulimbranchial Cyst	17 [2.0]	8 [2.0]	8 [2.1]	5 [1.4]	
C-Cell, Hyperplasia		1 [2.0]			
Follicle, Cyst		2 [1.0]			
Follicle, Degeneration	1 [1.0]				
Follicular Cell, Hyperplasia		1 [2.0]		1 [2.0]	

a Number of animals examined microscopically at site and number of animals with lesion
 b Average severity grade (1-minimal;2-mild;3-moderate;4-marked)

NTP Experiment-Test: 88138-03
 Study Type: CHRONIC
 Route: DOSED FEED

INCIDENCE RATES OF NONNEOPLASTIC LESIONS BY ANATOMIC SITE (a)
 WITH AVERAGE SEVERITY GRADES^[b]
 BENZOPHENONE

Report: PEIRPT18
 Date: 07/21/03
 Time: 16:01:01

FISCHER 344 RATS MALE

0 PPM

312 PPM

625 PPM

1250 PPM

GENERAL BODY SYSTEM

None

GENITAL SYSTEM

Epididymis	(50)	(50)	(50)	(50)
Granuloma Sperm	1 [1.0]		1 [1.0]	2 [1.5]
Inflammation	3 [2.0]		4 [1.3]	1 [1.0]
Preputial Gland	(50)	(50)	(50)	(49)
Atrophy			1 [4.0]	
Hyperplasia	1 [3.0]	1 [3.0]	1 [2.0]	1 [2.0]
Inflammation	2 [4.0]	2 [2.5]	1 [2.0]	1 [2.0]
Duct, Cyst			1 [2.0]	1 [4.0]
Prostate	(50)	(50)	(50)	(50)
Atrophy	4 [2.3]	7 [1.1]	8 [1.4]	4 [1.3]
Hyperplasia	2 [1.0]	3 [1.3]	4 [1.8]	26 [1.6]
Inflammation	18 [1.6]	17 [1.2]	26 [1.5]	(49)
Seminal Vesicle	(50)	(50)	(50)	(49)
Atrophy	3 [1.7]	7 [1.0]	8 [1.5]	4 [1.3]
Inflammation	1 [3.0]		1 [3.0]	1 [2.0]
Mineralization				4 [2.8]
Testes	(50)	(50)	(50)	(50)
Inflammation		1 [4.0]		1 [1.0]
Necrosis		2 [4.0]		
Germinal Epithelium, Degeneration	6 [2.8]	5 [3.6]	6 [2.0]	7 [2.9]
Interstitial Cell, Hyperplasia	15 [1.9]	12 [2.3]	14 [2.0]	22 [1.9]

HEMATOPOIETIC SYSTEM

Bone Marrow	(50)	(49)	(50)	(50)
Hyperplasia, Megakaryocyte		1 [2.0]		
Inflammation, Granulomatous		1 [2.0]	1 [2.0]	2 [2.0]
Myelofibrosis		1 [2.0]	2 [2.0]	2 [1.0]
Necrosis				
Erythroid Cell, Hyperplasia	13 [1.8]	3 [1.3]	10 [1.4]	10 [1.7]
Myeloid Cell, Hyperplasia	21 [2.8]	27 [2.5]	20 [2.8]	14 [2.7]
Lymph Node	(19)	(20)	(16)	(19)
Deep Cervical, Ectasia				1 [2.0]
Deep Cervical, Infiltration Cellular, Plasma Cell	1 [2.0]	2 [2.0]		2 [1.5]

a Number of animals examined microscopically at site and number of animals with lesion
 b Average severity grade (1-minimal;2-mild;3-moderate;4-marked)

NTP Experiment-Test: 88138-03
 Study Type: CHRONIC
 Route: DOSED FEED

INCIDENCE RATES OF NONNEOPLASTIC LESIONS BY ANATOMIC SITE (a)
 WITH AVERAGE SEVERITY GRADES [b]
 BENZOPHENONE

Report: PEIRPT18
 Date: 07/21/03
 Time: 16:01:01

FISCHER 344 RATS MALE

0 PPM 312 PPM 625 PPM 1250 PPM

HEMATOPOIETIC SYSTEM - CONT	0 PPM	312 PPM	625 PPM	1250 PPM
Mediastinal, Ectasia	3 [2.3]		4 [1.5]	3 [1.0]
Mediastinal, Hemorrhage	1 [1.0]		1 [2.0]	2 [2.0]
Mediastinal, Hyperplasia			1 [2.0]	2 [2.0]
Mediastinal, Infiltration Cellular, Plasma Cell		1 [2.0]	2 [1.5]	3 [2.0]
Mediastinal, Infiltration Cellular, Histiocyte	2 [1.5]		1 [2.0]	2 [2.0]
Mediastinal, Inflammation			1 [2.0]	2 [2.0]
Pancreatic, Ectasia			1 [1.5]	1 [1.0]
Pancreatic, Hemorrhage			1 [2.0]	1 [1.0]
Pancreatic, Infiltration Cellular, Histiocyte	1 [3.0]	1 [2.0]	2 [3.0]	1 [3.0]
Pancreatic, Inflammation			3 [2.3]	1 [2.0]
Renal, Ectasia				1 [3.0]
Renal, Infiltration Cellular, Histiocyte	(5)	(1)	(2)	1 [3.0]
Lymph Node, Mandibular	1 [4.0]			1 [3.0]
Ectasia	(50)	(50)	(50)	(50)
Lymph Node, Mesenteric	1 [1.0]	2 [1.0]	5 [1.6]	6 [2.0]
Atrophy	4 [2.0]	41 [1.5]	48 [1.6]	4 [1.8]
Infiltration Cellular, Histiocyte	47 [1.2]	41 [1.5]	48 [1.6]	46 [1.5]
Inflammation	1 [4.0]	(50)	(50)	(50)
Spleen	(50)	(50)	(50)	(50)
Accessory Spleen		1		
Autolysis	1 [2.0]	42 [1.2]	45 [1.2]	41 [1.2]
Hematopoietic Cell Proliferation	45 [1.2]	42 [1.2]	45 [1.2]	41 [1.2]
Hemorrhage			1 [1.0]	1 [3.0]
Hyperplasia, Lymphoid	6 [2.0]	2 [2.0]	9 [2.7]	4 [2.0]
Inflammation, Granulomatous	1 [2.0]	3 [3.0]	7 [3.3]	1 [4.0]
Necrosis	1 [2.0]	2 [2.5]		1 [2.0]
Pigmentation, Hemosiderin	39 [1.1]	43 [1.0]	44 [1.0]	43 [1.0]
Lymphoid Follicle, Atrophy	1 [1.0]	(48)	1 [2.0]	2 [2.5]
Thymus	(48)	(48)	(48)	(48)
Atrophy	44 [3.6]	42 [3.6]	47 [3.8]	46 [3.8]
Ectopic Parathyroid Gland	1 [3.0]	1 [3.0]		4 [1.0]

INTEGUMENTARY SYSTEM

Mammary Gland	(50)	(48)	(50)	(50)
Fibrosis	1 [3.0]			
Galactocele	2 [1.0]		1 [1.0]	
Inflammation	1 [3.0]			

a Number of animals examined microscopically at site and number of animals with lesion
 b Average severity grade (1-minimal;2-mild;3-moderate;4-marked)

NTP Experiment-Test: 88138-03
 Study Type: CHRONIC
 Route: DOSED FEED

INCIDENCE RATES OF NONNEOPLASTIC LESIONS BY ANATOMIC SITE (a)
 WITH AVERAGE SEVERITY GRADES^[b]
 BENZOPHENONE

Report: PE1RPT18
 Date: 07/21/03
 Time: 16:01:01

FISCHER 344 RATS MALE

0 PPM 312 PPM 625 PPM 1250 PPM

INTEGUMENTARY SYSTEM - CONT

Skin	(50)	(50)	(50)	(50)
Hyperplasia		1 [2.0]		
Inflammation	2 [1.5]			
Subcutaneous Tissue, Inflammation		1 [1.0]		

MUSCULOSKELETAL SYSTEM

Bone	(50)	(50)	(50)	(50)
Fibrous Osteodystrophy			1 [2.0]	4 [1.8]
Osteosclerosis			1 [2.0]	
Skeletal Muscle	(2)	(2)	(1)	
Degeneration	1 [2.0]	1 [2.0]	1 [2.0]	
Inflammation	1 [3.0]			

NERVOUS SYSTEM

Brain	(50)	(50)	(50)	(50)
Hemorrhage	5 [1.8]	5 [1.8]	2 [2.5]	5 [2.2]
Necrosis	2 [2.0]	4 [1.8]		
Peripheral Nerve	(1)			
Infiltration Cellular, Mononuclear Cell	1 [1.0]			

RESPIRATORY SYSTEM

Lung	(50)	(49)	(50)	(50)
Inflammation, Acute	2 [1.0]	2 [2.0]	5 [1.2]	7 [1.3]
Inflammation, Granulomatous	2 [1.0]	4 [2.3]	5 [2.0]	2 [2.0]
Metaplasia, Squamous			1 [1.0]	1 [1.0]
Mineralization			2 [2.5]	10 [2.7]
Necrosis	1 [2.0]			
Thrombosis		1 [2.0]	1 [3.0]	
Alveolar Epithelium, Hyperplasia	16 [1.4]	5 [2.0]	13 [1.6]	7 [1.3]
Alveolus, Infiltration Cellular, Histocyte	46 [1.7]	47 [1.5]	49 [1.5]	50 [1.8]
Bronchiole, Hyperplasia	1 [1.0]	3 [2.0]		
Interstitialium, Fibrosis		2 [1.5]		
Nose	(50)	(50)	(50)	(50)
Inflammation	7 [2.0]	7 [1.9]	8 [1.9]	9 [1.9]
Thrombosis	1 [2.0]	2 [3.0]	1 [3.0]	
Olfactory Epithelium, Degeneration	1 [1.0]			
Olfactory Epithelium, Metaplasia	1 [2.0]		1 [1.0]	

a Number of animals examined microscopically at site and number of animals with lesion
 b Average severity grade (1-minimal;2-mild;3-moderate;4-marked)

NTP Experiment-Test: 88138-03
 Study Type: CHRONIC
 Route: DOSED FEED

INCIDENCE RATES OF NONNEOPLASTIC LESIONS BY ANATOMIC SITE (a)
 WITH AVERAGE SEVERITY GRADES [b]
 BENZOPHENONE

Report: PEIRPT18
 Date: 07/21/03
 Time: 16:01:01

FISCHER 344 RATS MALE

0 PPM 312 PPM 625 PPM 1250 PPM

RESPIRATORY SYSTEM - CONT	0 PPM	312 PPM	625 PPM	1250 PPM
Respiratory Epithelium, Hyperplasia	1 [2.0]	(50)	1 [1.0]	(50)
Trachea	(50)	(50)	(50)	(50)
Inflammation	2 [1.0]	1 [1.0]	8 [1.0]	3 [2.3]

SPECIAL SENSES SYSTEM

Eye	(50)	(50)	(50)	(50)
Anterior Chamber, Inflammation	(50)	(50)	(50)	(50)
Ciliary Body, Inflammation	(50)	(50)	1 [1.0]	1 [3.0]
Cornea, Inflammation	(50)	(50)	1 [1.0]	1 [1.0]
Iris, Fibrosis	1 [3.0]	(50)	1 [3.0]	1 [1.0]
Iris, Inflammation	1 [1.0]	(50)	1 [3.0]	1 [2.0]
Lens, Cataract	2 [3.0]	(50)	1 [4.0]	(50)
Lens, Mineralization	1 [2.0]	(50)	(50)	(50)
Retina, Atrophy	1 [2.0]	(50)	(50)	(50)
Retina, Degeneration	5 [2.2]	2 [1.0]	5 [1.8]	(50)
Harderian Gland	(50)	(50)	(50)	(50)
Hyperplasia	1 [1.0]	4 [1.0]	1 [3.0]	1 [1.0]
Infiltration Cellular, Lymphoid	9 [1.2]	4 [1.0]	9 [1.0]	3 [1.0]

URINARY SYSTEM

Kidney	(50)	(50)	(50)	(50)
Accumulation, Hyaline Droplet	4 [1.8]	1 [2.0]	4 [1.5]	2 [2.5]
Hyperplasia, Oncocytic	1	3	1 [2.0]	(50)
Infarct	1	1	1	1
Nephropathy	50 [1.3]	45 [2.4]	50 [3.3]	50 [3.8]
Artery, Inflammation	1	1	1	1
Cortex, Mineralization	1	1	4 [2.5]	14 [2.8]
Medulla, Mineralization	47 [1.0]	49 [1.2]	47 [1.1]	49 [1.2]
Papilla, Transitional Epithelium, Hyperplasia	1 [1.0]	11 [1.2]	1 [1.0]	1 [1.0]
Pelvis, Inflammation	1 [1.0]	11 [1.2]	29 [1.5]	34 [1.7]
Pelvis, Transitional Epithelium, Hyperplasia	1 [1.0]	5 [1.4]	1	9
Renal Tubule, Cyst	1 [1.0]	1 [1.0]	20 [1.5]	23 [1.3]
Renal Tubule, Hyperplasia	1 [4.0]	1 [1.0]	2 [3.0]	(50)
Renal Tubule, Pigmentation	(50)	(50)	(50)	(50)
Urinary Bladder	3 [1.7]	1	1	2 [1.5]
Calculus Gross Observation	1 [1.0]	1	2 [2.5]	2 [1.5]
Inflammation	1 [1.0]	1	2 [2.5]	2 [1.5]
Muscularis, Degeneration	1 [1.0]	1	2 [2.5]	2 [1.5]

a Number of animals examined microscopically at site and number of animals with lesion
 b Average severity grade (1-minimal;2-mild;3-moderate;4-marked)

NTP Experiment-Test: 88138-04
Study Type: CHRONIC
Route: DOSED FEED

INCIDENCE RATES OF NONNEOPLASTIC LESIONS BY ANATOMIC SITE (a)
BENZOPHENONE

Report: PEIRPT03
Date: 06/24/03
Time: 08:30:21

FINAL#1/MICE

Facility: Battelle Columbus Laboratory

Chemical CAS #: 119-61-9

Lock Date: 04/26/02

Cage Range: All

Reasons For Removal: All

Removal Date Range: All

Treatment Groups: Include All

a Number of animals examined microscopically at site and number of animals with lesion

NTP Experiment-Test: 88138-04
 Study Type: CHRONIC
 Route: DOSED FEED

INCIDENCE RATES OF NONNEOPLASTIC LESIONS BY ANATOMIC SITE (a)
 BENZOPHENONE

Report: PEIRPT03
 Date: 06/24/03
 Time: 08:30:21

B6C3F1 MICE FEMALE

0 PPM

312 PPM

625 PPM

1250 PPM

DISPOSITION SUMMARY

	0 PPM	312 PPM	625 PPM	1250 PPM
Animals Initially In Study	50	50	50	50
Early Deaths				
Moribund Sacrifice	4	2	5	6
Natural Death	6	6	4	12
Accidentally Killed				1
Survivors				
Terminal Sacrifice	40	42	41	31
Animals Examined Microscopically	50	50	50	50

ALIMENTARY SYSTEM

Gallbladder	(49)	(50)	(50)	(50)
Cyst		1 (2%)		
Infiltration Cellular, Lymphoid	1 (2%)		1 (2%)	1 (2%)
Inflammation, Chronic Active			1 (2%)	1 (2%)
Mineralization			1 (2%)	
Intestine Large, Colon	(50)	(50)	(50)	(50)
Inflammation, Chronic Active				1 (2%)
Intestine Small, Duodenum	(50)	(50)	(50)	(50)
Inflammation, Chronic Active				1 (2%)
Intestine Small, Jejunum	(50)	(50)	(50)	(50)
Peyer's Patch, Hyperplasia, Lymphoid	(50)	3 (6%)	(50)	1 (2%)
Intestine Small, Ileum	(50)	(50)	(50)	(50)
Peyer's Patch, Hyperplasia, Lymphoid		1 (2%)		
Liver	(50)	(50)	(50)	(50)
Angiectasis	2 (4%)			4 (8%)
Basophilic Focus	3 (6%)		1 (2%)	2 (4%)
Clear Cell Focus	3 (6%)	2 (4%)	4 (8%)	4 (8%)
Eosinophilic Focus	2 (4%)	2 (4%)	7 (14%)	4 (8%)
Hematopoietic Cell Proliferation	18 (36%)	11 (22%)	20 (40%)	19 (38%)
Infarct				1 (2%)
Infiltration Cellular, Lymphoid	36 (72%)	38 (76%)	35 (70%)	35 (70%)
Inflammation, Chronic Active	44 (88%)	40 (80%)	41 (82%)	36 (72%)
Mineralization			1 (2%)	
Mixed Cell Focus	2 (4%)	5 (10%)	3 (6%)	2 (4%)
Tension Lipidosis	4 (8%)	8 (16%)	3 (6%)	7 (14%)
Bile Duct, Hyperplasia	1 (2%)			
Hepatocyte, Autolysis			1 (2%)	1 (2%)
Hepatocyte, Mitotic Alteration				
Hepatocyte, Multinucleated				2 (4%)

a Number of animals examined microscopically at site and number of animals with lesion

NTP Experiment-Test: 88138-04
 Study Type: CHRONIC
 Route: DOSED FEED

INCIDENCE RATES OF NONNEOPLASTIC LESIONS BY ANATOMIC SITE (a)
 BENZOPHENONE

Report: PEIRP03
 Date: 06/24/03
 Time: 08:30:21

B6C3F1 MICE FEMALE 0 PPM 312 PPM 625 PPM 1250 PPM

	0 PPM	312 PPM	625 PPM	1250 PPM
ALIMENTARY SYSTEM - CONT				
Hepatocyte, Necrosis	3 (6%)	5 (10%)	4 (8%)	34 (68%)
Hepatocyte, Vacuolization	41 (82%)	43 (86%)	39 (78%)	1 (2%)
Hepatocyte, Centrilobular, Degeneration		29 (58%)	44 (88%)	37 (74%)
Hepatocyte, Centrilobular, Hypertrophy		(9)	(11)	(9)
Mesentery	(6)	2 (22%)	8 (73%)	4 (44%)
Fat, Fibrosis	1 (17%)			1 (11%)
Fat, Hemorrhage				4 (36%)
Fat, Infiltration Cellular, Lymphoid	1 (17%)	3 (33%)	7 (64%)	3 (33%)
Fat, Inflammation, Chronic Active		1 (11%)	2 (18%)	1 (11%)
Fat, Mineralization	1 (17%)	4 (44%)	9 (82%)	4 (44%)
Fat, Necrosis	(50)	(50)	(50)	(50)
Pancreas				
Cyst	1 (2%)	2 (4%)	33 (66%)	18 (36%)
Infiltration Cellular, Lymphoid	20 (40%)	24 (48%)	1 (2%)	2 (4%)
Acinus, Atrophy	1 (2%)	1 (2%)		
Acinus, Cytoplasmic Alteration				
Duct, Inflammation, Chronic Active		1 (2%)		
Duct, Pigmentation				
Salivary Glands	(50)	(50)	(50)	(50)
Infiltration Cellular, Lymphoid	27 (54%)	34 (68%)	30 (60%)	28 (56%)
Stomach, Fore stomach	(50)	(50)	(50)	(50)
Inflammation, Chronic Active	1 (2%)	1 (2%)	1 (2%)	1 (2%)
Epithelium, Hyperkeratosis	1 (2%)	1 (2%)		1 (2%)
Epithelium, Hyperplasia, Squamous	1 (2%)	1 (2%)		1 (2%)
Epithelium, Ulcer	1 (2%)			1 (2%)
Stomach, Glandular	(50)	(50)	(50)	(50)
Epithelium, Glands, Hyperplasia	1 (2%)			
Glands, Ectasia	18 (36%)	16 (32%)	22 (44%)	10 (20%)
Glands, Mineralization		3 (6%)		2 (4%)
Tooth	(21)	(29)	(24)	(20)
Malformation				
Gingiva, Inflammation, Chronic Active	21 (100%)	29 (100%)	24 (100%)	20 (100%)

CARDIOVASCULAR SYSTEM

Blood Vessel	(50)	(50)	(50)	(50)
Aorta, Mineralization				1 (2%)
Heart	(50)	(50)	(50)	(50)
Cardiomyopathy				1 (2%)
Hyperplasia, Atypical				1 (2%)
Inflammation, Chronic Active	2 (4%)	1 (2%)		1 (2%)
Mineralization				1 (2%)

a Number of animals examined microscopically at site and number of animals with lesion

NTP Experiment-Test: 88138-04
 Study Type: CHRONIC
 Route: DOSED FEED

INCIDENCE RATES OF NONNEOPLASTIC LESIONS BY ANATOMIC SITE (a)
 BENZOPHENONE

Report: PEIRPT03
 Date: 06/24/03
 Time: 08:30:21

B6C3F1 MICE FEMALE

0 PPM

312 PPM

625 PPM

1250 PPM

CARDIOVASCULAR SYSTEM - CONT
 Necrosis
 Valve, Inflammation, Chronic Active

1 (2%)
 1 (2%)

ENDOCRINE SYSTEM

Adrenal Cortex	(50)	(50)	(50)	(49)
Accessory Adrenal Cortical Nodule	1 (2%)			1 (2%)
Hematopoietic Cell Proliferation	1 (2%)			1 (2%)
Hemorrhage				1 (2%)
Hyperplasia	2 (4%)			
Hypertrophy	1 (2%)	1 (2%)		
Inflammation, Chronic Active	1 (2%)			
Mineralization				1 (2%)
Necrosis		1 (2%)		1 (2%)
Subcapsular, Hyperplasia	49 (98%)	49 (98%)	49 (98%)	49 (100%)
Adrenal Medulla	(50)	(50)	(50)	(49)
Hyperplasia			2 (4%)	
Islets, Pancreatic	(50)	(50)	(50)	(50)
Hyperplasia	3 (6%)	1 (2%)		
Parathyroid Gland	(42)	(41)		
Cyst			(40)	(40)
Pituitary Gland	(50)	(50)	3 (8%)	1 (3%)
Pars Distalis, Angiectasis	2 (4%)	4 (8%)	(49)	(47)
Pars Distalis, Cyst	5 (10%)	3 (6%)	5 (10%)	3 (6%)
Pars Distalis, Hyperplasia	14 (28%)	14 (28%)	13 (27%)	3 (6%)
Pars Distalis, Hypertrophy			1 (2%)	
Pars Distalis, Pigmentation			1 (2%)	
Thyroid Gland	(50)	(50)	(50)	(50)
Infiltration Cellular, Lymphoid		1 (2%)	2 (4%)	2 (4%)
Inflammation, Chronic Active		1 (2%)	2 (4%)	1 (2%)
C-Cell, Hyperplasia				
Follicle, Cyst		1 (2%)		
Follicle, Degeneration	17 (34%)	19 (38%)	12 (24%)	9 (18%)

GENERAL BODY SYSTEM

None

GENITAL SYSTEM

a Number of animals examined microscopically at site and number of animals with lesion

NTP Experiment-Test: 88138-04
 Study Type: CHRONIC
 Route: DOSED FEED

INCIDENCE RATES OF NONNEOPLASTIC LESIONS BY ANATOMIC SITE (a)
 BENZOPHENONE

Report: PEIRPT03
 Date: 06/24/03
 Time: 08:30:21

	0 PPM	312 PPM	625 PPM	1250 PPM
GENITAL SYSTEM - CONT				
Clitoral Gland	(50)	(49)	(50)	(50)
Inflammation, Chronic Active	8 (16%)	1 (2%)		2 (4%)
Duct, Cyst	1 (2%)			
Ovary	(49)	(50)	(50)	(50)
Angiectasis	1 (2%)	1 (2%)	46 (92%)	45 (90%)
Atrophy	48 (98%)	48 (96%)	17 (34%)	14 (28%)
Cyst	22 (45%)	17 (34%)	3 (6%)	4 (8%)
Hemorrhage	2 (4%)	5 (10%)		1 (2%)
Infiltration Cellular, Lymphoid			1 (2%)	
Inflammation, Chronic Active	2 (4%)	1 (2%)	2 (4%)	
Mineralization		4 (8%)	3 (6%)	
Pigmentation	6 (12%)	2 (4%)	3 (6%)	1 (2%)
Uterus	(49)	(50)	(50)	(50)
Angiectasis	1 (2%)		1 (2%)	
Inflammation, Chronic Active	5 (10%)	4 (8%)	2 (4%)	2 (4%)
Endometrium, Hyperplasia, Cystic	47 (96%)	45 (90%)	44 (88%)	43 (86%)

HEMATOPOIETIC SYSTEM

Bone Marrow	(50)	(50)	(50)	(50)
Myelofibrosis	18 (36%)	30 (60%)	20 (40%)	26 (52%)
Myeloid Cell, Hyperplasia	1 (2%)			
Lymph Node	(8)	(12)	(11)	(15)
Lumbar, Hyperplasia, Lymphoid	1 (13%)	1 (8%)		2 (13%)
Mediastinal, Atrophy	1 (13%)			
Mediastinal, Hyperplasia, Lymphoid	2 (25%)	5 (42%)	4 (36%)	4 (27%)
Mediastinal, Infiltration Cellular, Histiocyte				
Mediastinal, Inflammation, Chronic Active	1 (13%)		4 (36%)	
Pancreatic, Hyperplasia, Lymphoid	1 (13%)		2 (18%)	1 (7%)
Pancreatic, Pigmentation			1 (9%)	
Renal, Hemorrhage		1 (8%)		1 (7%)
Renal, Hyperplasia, Lymphoid		3 (25%)		1 (7%)
Lymph Node, Mandibular	(50)	(50)	(50)	(49)
Hyperplasia, Lymphoid	4 (8%)	20 (40%)	12 (24%)	9 (18%)
Lymph Node, Mesenteric	(50)	(49)	(49)	(50)
Hyperplasia, Lymphoid	6 (12%)	12 (24%)	6 (12%)	4 (8%)
Spleen	(50)	(50)	(50)	(50)
Hematopoietic Cell Proliferation	16 (32%)	35 (70%)	32 (64%)	27 (54%)
Hemorrhage				2 (4%)
Inflammation, Chronic Active				1 (2%)
Necrosis				1 (2%)

a Number of animals examined microscopically at site and number of animals with lesion

NTP Experiment-Test: 88138-04
 Study Type: CHRONIC
 Route: DOSED FEED

INCIDENCE RATES OF NONNEOPLASTIC LESIONS BY ANATOMIC SITE (a)
 BENZOPHENONE

Report: PEIRPT03
 Date: 06/24/03
 Time: 08:30:21

B6C3F1 MICE FEMALE

0 PPM 312 PPM 625 PPM 1250 PPM

HEMATOPOIETIC SYSTEM - CONT				
Lymphoid Follicle, Hyperplasia, Lymphoid	24 (48%)	36 (72%)	37 (74%)	22 (44%)
Thymus	(46)	(50)	(50)	(50)
Atrophy	8 (17%)	7 (14%)	3 (6%)	13 (26%)
Cyst	23 (50%)	35 (70%)	31 (62%)	24 (48%)
Ectopic Parathyroid Gland	1 (2%)	3 (6%)	1 (2%)	1 (2%)
Hyperplasia, Lymphoid		8 (16%)	5 (10%)	2 (4%)
Infiltration Cellular, Mast Cell			1 (2%)	
Inflammation, Chronic Active	1 (2%)			
Thymocyte, Necrosis		1 (2%)		

INTEGUMENTARY SYSTEM

Skin	(50)	(50)	(50)	(50)
Subcutaneous Tissue, Fibrosis		1 (2%)		
Subcutaneous Tissue, Infiltration Cellular, Lymphoid		4 (8%)	1 (2%)	
Subcutaneous Tissue, Infiltration Cellular, Polymorphonuclear	1 (2%)			

MUSCULOSKELETAL SYSTEM

Bone	(50)	(50)	(50)	(50)
Maxilla, Fracture		(4)	(2)	1 (2%)
Skeletal Muscle	(2)	3 (75%)	2 (100%)	(4)
Infiltration Cellular, Lymphoid				

NERVOUS SYSTEM

Brain	(50)	(50)	(50)	(50)
Hemorrhage		1 (2%)		2 (4%)
Infiltration Cellular, Lymphoid			2 (4%)	
Inflammation, Chronic Active				1 (2%)

RESPIRATORY SYSTEM

Lung	(50)	(50)	(50)	(50)
Foreign Body	1 (2%)			
Infiltration Cellular, Lymphoid	33 (66%)	44 (88%)	44 (88%)	35 (70%)
Inflammation, Chronic Active		1 (2%)	1 (2%)	

a Number of animals examined microscopically at site and number of animals with lesion

NTP Experiment-Test: 88138-04
 Study Type: CHRONIC
 Route: DOSED FEED

INCIDENCE RATES OF NONNEOPLASTIC LESIONS BY ANATOMIC SITE (a)
 BENZOPHENONE

Report: PEIRPT03
 Date: 06/24/03
 Time: 08:30:21

B6C3F1 MICE FEMALE

0 PPM 312 PPM 625 PPM 1250 PPM

RESPIRATORY SYSTEM - CONT

Metaplasia, Osseous				1 (2%)
Pigmentation				2 (4%)
Alveolar Epithelium, Hyperplasia	1 (2%)	1 (2%)	2 (4%)	2 (4%)
Alveolus, Hemorrhage	2 (4%)			3 (6%)
Alveolus, Infiltration Cellular, Histiocyte	1 (2%)			2 (4%)
Mediastinum, Inflammation, Chronic Active	1 (2%)			
Nose	(50)	(50)	(50)	(50)
Hemorrhage				1 (2%)
Inflammation, Chronic Active	1 (2%)		1 (2%)	1 (2%)
Nasolacrimal Duct, Inflammation, Chronic				
Active	1 (2%)			
Olfactory Epithelium, Glands, Metaplasia	(50)	(50)	(50)	39 (78%)
Trachea				(50)
Glands, Cyst		1 (2%)		
Glands, Inflammation, Chronic Active		1 (2%)		

SPECIAL SENSES SYSTEM

Eye	(50)	(50)	(50)	(50)
Atrophy	2 (4%)		1 (2%)	
Lens, Cataract		(50)	(50)	(49)
Harderian Gland	(50)	3 (6%)	3 (6%)	1 (2%)
Hyperplasia		27 (54%)	27 (54%)	23 (47%)
Infiltration Cellular, Lymphoid	29 (58%)			

URINARY SYSTEM

Kidney	(50)	(50)	(50)	(50)
Accumulation, Hyaline Droplet			1 (2%)	1 (2%)
Atrophy	1 (2%)			
Glomerulosclerosis				1 (2%)
Hydronephrosis	2 (4%)			1 (2%)
Infarct	4 (8%)			3 (6%)
Infiltration Cellular, Lymphoid	41 (82%)	1 (2%)	3 (6%)	39 (78%)
Inflammation, Chronic Active	1 (2%)	45 (90%)	43 (86%)	
Metaplasia, Osseous	1 (2%)	2 (4%)	4 (8%)	2 (4%)
Mineralization	15 (30%)	31 (62%)	36 (72%)	49 (98%)
Nephropathy	21 (42%)	33 (66%)	31 (62%)	30 (60%)
Artery, Inflammation, Chronic Active	1 (2%)			1 (2%)
Cortex, Cyst		1 (2%)		
Renal Tubule, Pigmentation	1 (2%)	1 (2%)	1 (2%)	

a Number of animals examined microscopically at site and number of animals with lesion

NTP Experiment-Test: 88138-04
Study Type: CHRONIC
Route: DOSED FEED

INCIDENCE RATES OF NONNEOPLASTIC LESIONS BY ANATOMIC SITE (a)
BENZOPHENONE

Report: PEIRPT03
Date: 06/24/03
Time: 08:30:21

B6C3F1 MICE FEMALE

0 PPM

312 PPM

625 PPM

1250 PPM

URINARY SYSTEM - CONT

Urinary Bladder
Infiltration Cellular, Lymphoid
Inflammation, Chronic Active

(50)
37 (74%)

(49)
38 (78%)

(50)
40 (80%)

(50)
39 (78%)
1 (2%)

a Number of animals examined microscopically at site and number of animals with lesion

NTP Experiment-Test: 88138-04
 Study Type: CHRONIC
 Route: DOSED FEED

INCIDENCE RATES OF NONNEOPLASTIC LESIONS BY ANATOMIC SITE (a)
 BENZOPHENONE

Report: PEIRPT03
 Date: 06/24/03
 Time: 08:30:21

B6C3F1 MICE MALE

0 PPM 312 PPM 625 PPM 1250 PPM

DISPOSITION SUMMARY

	0 PPM	312 PPM	625 PPM	1250 PPM
Animals Initially In Study	50	50	50	50
Early Deaths	5	3	5	2
Moribund Sacrifice	1	3	1	3
Natural Death				
Survivors	44	44	44	45
Terminal Sacrifice				
Animals Examined Microscopically	50	50	50	50

ALIMENTARY SYSTEM

Gallbladder	(45)	(49)	(49)	(49)
Cyst			1 (2%)	
Intestine Small, Jejunum	(50)	(50)	(50)	(50)
Peyer's Patch, Hyperplasia, Lymphoid	(50)	(50)	1 (2%)	(50)
Liver				
Basophilic Focus	4 (8%)	2 (4%)	5 (10%)	(50)
Clear Cell Focus	2 (4%)	7 (14%)	7 (14%)	12 (24%)
Eosinophilic Focus	5 (10%)	8 (16%)	11 (22%)	10 (20%)
Fatty Change			1 (2%)	
Fibrosis			1 (2%)	
Hematopoietic Cell Proliferation	2 (4%)	1 (2%)		1 (2%)
Infarct		2 (4%)		4 (8%)
Infiltration Cellular, Lymphoid	6 (12%)	10 (20%)	44 (88%)	42 (84%)
Inflammation, Chronic Active	33 (66%)	47 (94%)	15 (30%)	13 (26%)
Mixed Cell Focus	8 (16%)	9 (18%)		1 (2%)
Tension Lipidosis	1 (2%)	1 (2%)		1 (2%)
Bile Duct, Cyst		3 (6%)		
Hepatocyte, Degeneration, Cystic			5 (10%)	30 (60%)
Hepatocyte, Multinucleated		41 (82%)	47 (94%)	48 (96%)
Hepatocyte, Necrosis	1 (2%)	6 (12%)	8 (16%)	8 (16%)
Hepatocyte, Vacuolization Cytoplasmic	44 (88%)	45 (90%)	46 (92%)	44 (88%)
Hepatocyte, Centrilobular, Hypertrophy		44 (88%)	50 (100%)	48 (96%)
Oval Cell, Hyperplasia			1 (2%)	
Mesentery		(2)	(8)	(5)
Fat, Fibrosis		1 (50%)	5 (63%)	1 (20%)
Fat, Inflammation, Chronic Active		1 (50%)	5 (63%)	2 (40%)
Fat, Mineralization		1 (50%)	3 (38%)	
Fat, Necrosis		1 (50%)	5 (63%)	
Fat, Pigmentation		1 (50%)		
Pancreas	(50)	(50)	(50)	(50)

a Number of animals examined microscopically at site and number of animals with lesion

NTP Experiment-Test: 88138-04
 Study Type: CHRONIC
 Route: DOSED FEED

INCIDENCE RATES OF NONNEOPLASTIC LESIONS BY ANATOMIC SITE (a)
 BENZOPHENONE

Report: P1RPT03
 Date: 06/24/03
 Time: 08:30:21

B6C3F1 MICE MALE

0 PPM 312 PPM 625 PPM 1250 PPM

ALIMENTARY SYSTEM - CONT

Cyst	1 (2%)		1 (2%)	2 (4%)
Cytoplasmic Alteration				
Infiltration Cellular, Lymphoid	14 (28%)	11 (22%)	8 (16%)	8 (16%)
Acinus, Atrophy		1 (2%)	1 (2%)	1 (2%)
Acinus, Cytoplasmic Alteration			1 (2%)	
Salivary Glands	(50)	(50)	(50)	(50)
Atrophy		1 (2%)		
Infiltration Cellular, Lymphoid	31 (62%)	40 (80%)	40 (80%)	28 (56%)
Stomach, Forestomach	(50)	(50)	(50)	(50)
Hyperplasia		1 (2%)		
Inflammation, Chronic Active	1 (2%)	2 (4%)		
Epithelium, Cyst		1 (2%)		
Epithelium, Hyperkeratosis	1 (2%)	2 (4%)	1 (2%)	1 (2%)
Epithelium, Hyperplasia, Squamous	1 (2%)	2 (4%)	1 (2%)	1 (2%)
Epithelium, Ulcer	1 (2%)	1 (2%)		
Stomach, Glandular	(50)	(50)	(50)	(50)
Glands, Ectasia	7 (14%)	13 (26%)	18 (36%)	5 (10%)
Glands, Mineralization			1 (2%)	1 (2%)
Tooth	(20)	(31)	(33)	(21)
Inflammation, Chronic Active	1 (5%)	1 (3%)	3 (9%)	
Malformation	3 (15%)	30 (97%)	3 (9%)	
Gingiva, Inflammation, Chronic Active	18 (90%)		32 (97%)	20 (95%)

CARDIOVASCULAR SYSTEM

Heart	(50)	(50)	(50)	(50)
Hyperplasia, Atypical				1 (2%)
Inflammation, Chronic Active	3 (6%)	5 (10%)	3 (6%)	3 (6%)
Mineralization	1 (2%)			1 (2%)

ENDOCRINE SYSTEM

Adrenal Cortex	(50)	(50)	(50)	(50)
Degeneration, Fatty			2 (4%)	
Hyperplasia	7 (14%)	10 (20%)	9 (18%)	6 (12%)
Hypertrophy	26 (52%)	22 (44%)	24 (48%)	18 (36%)
Inflammation, Chronic Active			1 (2%)	
Necrosis		1 (2%)		
Subcapsular, Hyperplasia	50 (100%)	46 (92%)	46 (92%)	47 (94%)
Adrenal Medulla	(50)	(50)	(50)	(50)
Hyperplasia		1 (2%)		

a Number of animals examined microscopically at site and number of animals with lesion

NTP Experiment-Test: 88138-04
 Study Type: CHRONIC
 Route: DOSED FEED

INCIDENCE RATES OF NONNEOPLASTIC LESIONS BY ANATOMIC SITE (a)
 BENZOPHENONE

Report: PEIRPT03
 Date: 06/24/03
 Time: 08:30:21

	0 PPM	312 PPM	625 PPM	1250 PPM
ENDOCRINE SYSTEM - CONT				
Islets, Pancreatic	(50)	(50)	(50)	(50)
Hyperplasia	1 (2%)	1 (2%)		
Pituitary Gland	(48)	(49)	(50)	(50)
Pars Distalis, Cyst	7 (15%)	5 (10%)	5 (10%)	4 (8%)
Pars Distalis, Hyperplasia	1 (2%)	1 (2%)		
Pars Nervosa, Cyst		1 (2%)		
Thyroid Gland	(50)	(50)	(50)	(50)
Infiltration Cellular, Lymphoid			1 (2%)	1 (2%)
Inflammation, Chronic Active	2 (4%)			
Follicle, Cyst	2 (4%)			1 (2%)
Follicle, Degeneration	12 (24%)	9 (18%)	6 (12%)	6 (12%)
Follicular Cell, Hyperplasia			1 (2%)	1 (2%)
GENERAL BODY SYSTEM				
None				
GENITAL SYSTEM				
Epididymis	(50)	(50)	(50)	(50)
Degeneration		1 (2%)		
Granuloma Sperm	1 (2%)	2 (4%)	2 (4%)	1 (2%)
Infiltration Cellular, Lymphoid	32 (64%)	27 (54%)	30 (60%)	31 (62%)
Mineralization			4 (8%)	
Spermatocoele		1 (2%)		
Preputial Gland	(50)	(50)	(50)	(50)
Inflammation, Chronic Active	21 (42%)	23 (46%)	25 (50%)	32 (64%)
Duct, Ectasia	20 (40%)	15 (30%)	15 (30%)	28 (56%)
Prostate	(50)	(50)	(50)	(50)
Infiltration Cellular, Lymphoid	32 (64%)	43 (86%)	46 (92%)	28 (56%)
Inflammation, Chronic Active	1 (2%)			
Artery, Inflammation, Chronic Active	(50)	1 (2%)	(50)	1 (2%)
Seminal Vesicle	(50)	(50)	(50)	(50)
Artery, Inflammation, Chronic Active	1 (2%)			
Testes	(50)	(50)	(50)	(50)
Mineralization			1 (2%)	
Germinal Epithelium, Degeneration	1 (2%)	3 (6%)	1 (2%)	12 (24%)
Rete Testes, Cyst		1 (2%)		2 (4%)

a Number of animals examined microscopically at site and number of animals with lesion

NTP Experiment-Test: 88138-04
 Study Type: CHRONIC
 Route: DOSED FEED

INCIDENCE RATES OF NONNEOPLASTIC LESIONS BY ANATOMIC SITE (a)
 BENZOPHENONE

Report: PE1RPT03
 Date: 06/24/03
 Time: 08:30:21

B6C3F1 MICE MALE

0 PPM

312 PPM

625 PPM

1250 PPM

HEMATOPOIETIC SYSTEM

Bone Marrow	(49)	(50)	(50)	(50)
Myeloid Cell, Hyperplasia			1 (2%)	
Lymph Node	(1)	(1)	(3)	(5)
Deep Cervical, Hyperplasia, Lymphoid		1 (100%)	1 (33%)	
Mediastinal, Hyperplasia, Lymphoid			1 (33%)	
Mediastinal, Infiltration Cellular,				
Histocyte	1 (100%)			
Mediastinal, Inflammation, Granulomatous				1 (20%)
Lymph Node, Mandibular	(48)	(50)	(49)	(47)
Hyperplasia, Lymphoid	5 (10%)	1 (2%)	6 (12%)	5 (11%)
Lymph Node, Mesenteric	(49)	(50)	(49)	(48)
Hyperplasia, Lymphoid	2 (4%)	2 (4%)		2 (4%)
Infiltration Cellular, Histocyte	1 (2%)			
Inflammation, Granulomatous				1 (2%)
Spleen	(50)	(50)	(50)	(50)
Angiectasis			1 (2%)	
Hematopoietic Cell Proliferation	11 (22%)	7 (14%)	9 (18%)	14 (28%)
Lymphoid Follicle, Hyperplasia, Lymphoid	17 (34%)	31 (62%)	34 (68%)	32 (64%)
Thymus	(46)	(48)	(46)	(47)
Atrophy	12 (26%)	9 (19%)	6 (13%)	5 (11%)
Cyst	16 (35%)	25 (52%)	20 (43%)	20 (43%)
Ectopic Parathyroid Gland				
Ectopic Thyroid	2 (4%)			
Infiltration Cellular, Histocyte	1 (2%)		1 (2%)	

INTEGUMENTARY SYSTEM

Skin	(50)	(50)	(50)	(50)
Cyst Epithelial Inclusion				1 (2%)
Inflammation, Granulomatous	1 (2%)			
Mineralization				1 (2%)

MUSCULOSKELETAL SYSTEM

None

NERVOUS SYSTEM

Spinal Cord	(1)	(1)	(1)	
-------------	-----	-----	-----	--

a Number of animals examined microscopically at site and number of animals with lesion

NTP Experiment-Test: 88138-04
 Study Type: CHRONIC
 Route: DOSED FEED

INCIDENCE RATES OF NONNEOPLASTIC LESIONS BY ANATOMIC SITE (a)
 BENZOPHENONE

Report: PEIRPT03
 Date: 06/24/03
 Time: 08:30:21

B6C3F1 MICE MALE

0 PPM

312 PPM

625 PPM

1250 PPM

NERVOUS SYSTEM - CONT
 Degeneration

1 (100%)

RESPIRATORY SYSTEM

Lung	(50)	(50)	(50)	(50)
Infiltration Cellular, Lymphoid	32 (64%)	38 (76%)	47 (94%)	36 (72%)
Inflammation, Chronic Active	1 (2%)	2 (4%)	1 (2%)	1 (2%)
Metaplasia, Osseous			1 (2%)	
Necrosis	1 (2%)			
Thrombosis		1 (2%)		
Alveolar Epithelium, Hyperplasia	6 (12%)	7 (14%)	8 (16%)	4 (8%)
Alveolus, Infiltration Cellular, Histocyte	7 (14%)	1 (2%)	1 (2%)	3 (6%)
Mediastinum, Inflammation, Suppurative	(50)	(50)	(50)	(50)
Nose	2 (4%)		1 (2%)	2 (4%)
Inflammation, Chronic Active				
Inflammation, Focal, Suppurative			1 (2%)	1 (2%)
Inflammation, Suppurative				
Nasolacrimal Duct, Inflammation, Chronic Active			2 (4%)	1 (2%)
Olfactory Epithelium, Degeneration	1 (2%)		2 (4%)	1 (2%)
Olfactory Epithelium, Glands, Metaplasia		2 (4%)		24 (48%)

SPECIAL SENSES SYSTEM

Eye	(50)	(50)	(50)	(50)
Inflammation, Suppurative			1 (2%)	
Anterior Chamber, Iris, Inflammation, Suppurative			1 (2%)	
Cornea, Inflammation, Chronic Active	(50)	(50)	2 (4%)	1 (2%)
Harderian Gland			(50)	(50)
Hyperplasia	2 (4%)	3 (6%)	3 (6%)	2 (4%)
Infiltration Cellular, Lymphoid	37 (74%)	33 (66%)	24 (48%)	29 (58%)
Inflammation, Chronic Active	1 (2%)		1 (2%)	
Mineralization				1 (2%)

URINARY SYSTEM

Kidney	(50)	(50)	(50)	(50)
Infarct	1 (2%)	1 (2%)	1 (2%)	4 (8%)
Infiltration Cellular, Lymphoid	44 (88%)	44 (88%)	45 (90%)	45 (90%)

a Number of animals examined microscopically at site and number of animals with lesion

NTP Experiment-Test: 88138-04
 Study Type: CHRONIC
 Route: DOSED FEED

INCIDENCE RATES OF NONNEOPLASTIC LESIONS BY ANATOMIC SITE (a)
 BENZOPHENONE

Report: PETRPT03
 Date: 06/24/03
 Time: 08:30:21

	B6C3F1 MICE MALE	0 PPM	312 PPM	625 PPM	1250 PPM
URINARY SYSTEM - CONT					
Inflammation, Chronic Active		4 (8%)	1 (2%)	2 (4%)	8 (16%)
Metaplasia, Osseous		49 (98%)	50 (100%)	50 (100%)	50 (100%)
Mineralization				1 (2%)	50 (100%)
Necrosis		49 (98%)	48 (96%)	50 (100%)	50 (100%)
Nephropathy		1 (2%)	1 (2%)		22 (44%)
Artery, Inflammation, Chronic Active		4 (8%)	8 (16%)	12 (24%)	1 (2%)
Cortex, Cyst		(50)	(50)	(50)	(50)
Renal Tubule, Pigmentation		24 (48%)	24 (48%)	32 (64%)	23 (46%)
Urinary Bladder					
Infiltration Cellular, Lymphoid					

a Number of animals examined microscopically at site and number of animals with lesion

NTP Experiment-Test: 88138-04 INCIDENCE RATES OF NEOPLASMS BY ANATOMIC SITE (SYSTEMIC LESIONS ABRIDGED) (a)
Study Type: CHRONIC BENZOPHENONE
Route: DOSED FEED

Report: PETRPT05
Date: 06/24/03
Time: 08:31:29

FINAL#1/MICE

Facility: Battelle Columbus Laboratory
Chemical CAS #: 119-61-9
Lock Date: 04/26/02
Cage Range: All
Reasons For Removal: All
Removal Date Range: All
Treatment Groups: Include All

a Number of animals examined microscopically at site and number of animals with lesion

B6C3F1 MICE FEMALE 0 PPM 312 PPM 625 PPM 1250 PPM

DISPOSITION SUMMARY

Disposition	0 PPM	312 PPM	625 PPM	1250 PPM
Animals Initially in Study	50	50	50	50
Early Deaths				
Moribund Sacrifice	4	2	5	6
Natural Death	6	6	4	12
Accidentally Killed				1
Survivors	40	42	41	31
Terminal Sacrifice				
Animals Examined Microscopically	50	50	50	50

ALIMENTARY SYSTEM

Esophagus	(50)	(50)	(50)	(50)
Gallbladder	(49)	(50)	(50)	(50)
Histiocytic Sarcoma				2 (4%)
Intestine Large, Colon	(50)	(50)	(50)	(50)
Hemangiosarcoma, Metastatic, Skeletal Muscle	(50)	(50)	(50)	1 (2%)
Intestine Large, Rectum	1 (2%)	(50)	(50)	(50)
Sarcoma Stromal, Metastatic, Uterus	(50)	(50)	(50)	(50)
Intestine Large, Cecum	(50)	(50)	(50)	(50)
Intestine Small, Duodenum	(50)	(50)	(50)	3 (6%)
Polyp Adenomatous	1 (2%)			
Intestine Small, Jejunum	(50)	(50)	(50)	(50)
Carcinoma		1 (2%)		
Histiocytic Sarcoma				1 (2%)
Liver	(50)	(50)	(50)	(50)
Carcinoma, Metastatic, Thyroid Gland		1 (2%)		
Fibrous Histiocytoma, Metastatic, Skin				1 (2%)
Hemangiosarcoma			1 (2%)	1 (2%)
Hepatocellular Carcinoma			3 (6%)	5 (10%)
Hepatocellular Adenoma	4 (8%)		7 (14%)	3 (6%)
Hepatocellular Adenoma, Multiple	1 (2%)	1 (2%)	3 (6%)	3 (6%)
Histiocytic Sarcoma			5 (10%)	1 (2%)
Mast Cell Tumor Malignant				
Sarcoma Stromal, Metastatic, Uterus	1 (2%)			
Mesentery	(6)	(9)	(11)	(9)
Fat, Fibrosarcoma, Metastatic, Skin				1 (11%)
Fat, Fibrous Histiocytoma, Metastatic, Skin				1 (11%)
Fat, Hemangiosarcoma, Metastatic, Skeletal Muscle				1 (11%)

B6C3F1 MICE FEMALE

0 PPM

312 PPM

625 PPM

1250 PPM

ALIMENTARY SYSTEM - cont

Fat, Histiocytic Sarcoma					2 (22%)
Fat, Sarcoma Stromal, Metastatic, Uterus	1 (17%)	(2)			
Oral Mucosa		1 (50%)			
Gingival, Mast Cell Tumor Malignant		1 (50%)			
Pharyngeal, Squamous Cell Papilloma		(50)			
Pancreas	(50)				
Fibrosarcoma, Metastatic, Skin		(50)			(50)
Fibrous Histiocytoma, Metastatic, Skin					1 (2%)
Histiocytic Sarcoma					1 (2%)
Sarcoma Stromal, Metastatic, Uterus					2 (4%)
Salivary Glands	1 (2%)	(50)			(50)
Histiocytic Sarcoma	(50)				1 (2%)
Stomach, Fore stomach	(50)	(50)			(50)
Squamous Cell Carcinoma	1 (2%)				(50)
Squamous Cell Papilloma	1 (2%)				1 (2%)
Stomach, Glandular	(50)	(50)			(50)
Fibrosarcoma, Metastatic, Skin					1 (2%)
Fibrous Histiocytoma, Metastatic, Skin					1 (2%)
Histiocytic Sarcoma					1 (2%)

CARDIOVASCULAR SYSTEM

Blood Vessel	(50)	(50)	(50)	(50)	(50)
Histiocytic Sarcoma					1 (2%)
Aorta, Fibrous Histiocytoma, Metastatic, Skin					1 (2%)
Aorta, Histiocytic Sarcoma					1 (2%)
Heart	(50)	(50)			(50)
Hemangiosarcoma					1 (2%)
Hemangiosarcoma, Metastatic, Liver					1 (2%)
Histiocytic Sarcoma					1 (2%)

ENDOCRINE SYSTEM

Adrenal Cortex	(50)	(50)	(50)	(50)	(49)
Fibrosarcoma, Metastatic, Skin					1 (2%)
Histiocytic Sarcoma					3 (6%)
Subcapsular, Adenoma	1 (2%)				
Adrenal Medulla	(50)	(50)			(49)
Pheochromocytoma Benign	1 (2%)	1 (2%)			2 (4%)
Islets, Pancreatic	(50)	(50)			(50)
Carcinoma					1 (2%)

NTP Experiment-Test: 88138-04 INCIDENCE RATES OF NEOPLASMS BY ANATOMIC SITE (SYSTEMIC LESIONS ABRIDGED) (a)
 Study Type: CHRONIC BENZOPHENONE
 Route: DOSED FEED

Report: PEIRPT05
 Date: 06/24/03
 Time: 08:31:29

B6C3F1 MICE FEMALE

0 PPM 312 PPM 625 PPM 1250 PPM

ENDOCRINE SYSTEM - cont

Parathyroid Gland	(42)	(41)	(40)	(40)
Pituitary Gland	(50)	(50)	(49)	(47)
Pars Distalis, Adenoma	2 (4%)		2 (4%)	3 (6%)
Pars Distalis, Histiocytic Sarcoma				1 (2%)
Thyroid Gland	(50)	(50)	(50)	(50)
Histiocytic Sarcoma				1 (2%)
C-Cell, Carcinoma				1 (2%)
Follicular Cell, Adenoma				1 (2%)
Follicular Cell, Carcinoma		1 (2%)	2 (4%)	1 (2%)

GENERAL BODY SYSTEM

None

GENITAL SYSTEM

Clitoral Gland	(50)	(49)	(50)	(50)
Histiocytic Sarcoma			1 (2%)	1 (2%)
Ovary	(49)	(50)	(50)	(50)
Cystadenoma	1 (2%)	3 (6%)	3 (6%)	2 (4%)
Fibrous Histiocytoma, Metastatic, Skin				1 (2%)
Histiocytic Sarcoma				3 (6%)
Bilateral, Granulosa Cell Tumor Malignant				1 (2%)
Bilateral, Tubulostromal Adenoma	1 (2%)	(50)	(50)	(50)
Uterus	(49)			1 (2%)
Hemangiosarcoma, Metastatic, Skeletal Muscle				3 (6%)
Histiocytic Sarcoma		1 (2%)	1 (2%)	
Leiomyoma				
Polyp Stromal	3 (6%)			
Polyp Stromal, Multiple	1 (2%)			
Sarcoma Stromal	1 (2%)			
Bilateral, Polyp Stromal		1 (2%)		
Endometrium, Adenoma		1 (2%)		

HEMATOPOIETIC SYSTEM

Bone Marrow	(50)	(50)	(50)	(50)
Carcinoma, Metastatic, Thyroid Gland		1 (2%)		1 (2%)
Hemangiosarcoma	1 (2%)			
Histiocytic Sarcoma			1 (2%)	2 (4%)

NTP Experiment-Test: 88138-04
 Study Type: CHRONIC
 Route: DOSED FEED

INCIDENCE RATES OF NEOPLASMS BY ANATOMIC SITE (SYSTEMIC LESIONS ABRIDGED) (a)
 BENZOPHENONE

Report: PETRPT05
 Date: 06/24/03
 Time: 08:31:29

B6C3F1 MICE FEMALE

0 PPM

312 PPM

625 PPM

1250 PPM

HEMATOPOIETIC SYSTEM - cont

	0 PPM	312 PPM	625 PPM	1250 PPM
Mast Cell Tumor Malignant			1 (2%)	
Lymph Node	(8)	(12)	(11)	(15)
Deep Cervical, Carcinoma, Metastatic,		1 (8%)		
Thyroid Gland				1 (7%)
Inguinal, Histiocytic Sarcoma			1 (9%)	2 (13%)
Lumbar, Histiocytic Sarcoma				
Mediastinal, Carcinoma, Metastatic, Thyroid				1 (7%)
Gland				
Mediastinal, Fibrous Histiocytoma,				1 (7%)
Metastatic, Skin				1 (7%)
Mediastinal, Hemangiosarcoma, Metastatic,				1 (7%)
Skeletal Muscle				3 (20%)
Mediastinal, Histiocytic Sarcoma				1 (7%)
Pancratic, Fibrous Histiocytoma, Metastatic,				1 (7%)
Skin				1 (7%)
Pancratic, Histiocytic Sarcoma				1 (7%)
Renal, Fibrous Histiocytoma, Metastatic, Skin				1 (7%)
Renal, Histiocytic Sarcoma				2 (13%)
Lymph Node, Mandibular	(50)	(50)	1 (9%)	(49)
Histiocytic Sarcoma			3 (6%)	2 (4%)
Mast Cell Tumor Malignant, Metastatic, Oral				
Mucosa				
Lymph Node, Mesenteric	(50)	1 (2%)	(49)	(50)
Fibrous Histiocytoma, Metastatic, Skin		(49)		1 (2%)
Hemangiosarcoma, Metastatic, Skeletal Muscle				1 (2%)
Histiocytic Sarcoma			2 (4%)	3 (6%)
Sarcoma Stromal, Metastatic, Uterus				
Spleen	1 (2%)	(50)	(50)	(50)
Fibrous Histiocytoma, Metastatic, Skin				1 (2%)
Hemangioma				
Hemangiosarcoma, Metastatic, Bone Marrow				
Histiocytic Sarcoma	1 (2%)			
Thymus	(46)	(50)	2 (4%)	3 (6%)
Histiocytic Sarcoma			1 (2%)	1 (2%)
Mast Cell Tumor Malignant			1 (2%)	1 (2%)
Mast Cell Tumor Malignant, Metastatic, Oral				
Mucosa				1 (2%)

NTP Experiment Test: 88138-04 INCIDENCE RATES OF NEOPLASMS BY ANATOMIC SITE (SYSTEMIC LESIONS ABRIDGED) (a)
 Study Type: CHRONIC
 Route: DOSED FEED

BENZOPHENONE

Report: PEIRPT05
 Date: 06/24/03
 Time: 08:31:29

B6C3F1 MICE FEMALE

0 PPM

312 PPM

625 PPM

1250 PPM

INTEGUMENTARY SYSTEM

Mammary Gland	(50)	(50)	(49)	(50)
Adenoma	1 (2%)		1 (2%)	
Carcinoma				1 (2%)
Histiocytic Sarcoma	(50)	(50)	(50)	(50)
Skin	1 (2%)			
Osteosarcoma		1 (2%)		
Squamous Cell Carcinoma		1 (2%)		
Subcutaneous Tissue, Fibroma	1 (2%)		4 (8%)	1 (2%)
Subcutaneous Tissue, Fibrosarcoma				1 (2%)
Subcutaneous Tissue, Fibrous Histiocytoma		1 (2%)		1 (2%)
Subcutaneous Tissue, Hemangioma				1 (2%)
Subcutaneous Tissue, Histiocytic Sarcoma	1 (2%)			
Subcutaneous Tissue, Schwannoma Malignant		1 (2%)		
Subcutaneous Tissue, Schwannoma Malignant, Multiple		1 (2%)		
Subcutaneous Tissue, Trichoepithelioma				1 (2%)

MUSCULOSKELETAL SYSTEM

Bone	(50)	(50)	(50)	(50)
Sarcoma Stromal, Metastatic, Uterus	1 (2%)			
Skeletal Muscle	(2)	(4)	(2)	(4)
Hemangiosarcoma				1 (25%)
Histiocytic Sarcoma				1 (25%)
Sarcoma Stromal, Metastatic, Uterus	1 (50%)			

NERVOUS SYSTEM

Brain	(50)	(50)	(50)	(50)
-------	------	------	------	------

RESPIRATORY SYSTEM

Lung	(50)	(50)	(50)	(50)
Alveolar/Bronchiolar Adenoma		5 (10%)		2 (4%)
Alveolar/Bronchiolar Adenoma, Multiple	1 (2%)			1 (2%)
Alveolar/Bronchiolar Carcinoma, Multiple		1 (2%)		1 (2%)
Carcinoma, Metastatic, Thyroid Gland				1 (2%)
Carcinoma, Metastatic, Uncertain Primary Site				1 (2%)
Fibrosarcoma, Metastatic, Skin				1 (2%)

NTP Experiment-Test: 88138-04 INCIDENCE RATES OF NEOPLASMS BY ANATOMIC SITE (SYSTEMIC LESIONS ABRIDGED) (a)
 Study Type: CHRONIC
 Route: DOSED FEED

Report: PETRPT05
 Date: 06/24/03
 Time: 08:31:29

B6C3F1 MICE FEMALE

0 PPM 312 PPM 625 PPM 1250 PPM

RESPIRATORY SYSTEM - cont

Fibrous Histiocytoma, Metastatic, Skin				1 (2%)
Granulosa Cell Tumor Malignant, Metastatic, Ovary				
Hemangiosarcoma, Metastatic, Liver			1 (2%)	1 (2%)
Hemangiosarcoma, Metastatic, Skeletal Muscle				1 (2%)
Histiocytic Sarcoma			5 (10%)	3 (6%)
Osteosarcoma, Metastatic, Skin	1 (2%)			
Mediastinum, Fibrosarcoma, Metastatic, Skin				1 (2%)
Nose				
Histiocytic Sarcoma	(50)	(50)	(50)	(50)
Mast Cell Tumor Malignant			1 (2%)	1 (2%)
Trachea			1 (2%)	
Carcinoma, Metastatic, Thyroid Gland	(50)	(50)	(50)	(50)

SPECIAL SENSES SYSTEM

Eye				
Harderian Gland	(50)	(50)	(50)	(50)
Adenoma	(50)	(50)	(50)	(49)
Carcinoma	1 (2%)	3 (6%)	2 (4%)	3 (6%)
Histiocytic Sarcoma				1 (2%)
				1 (2%)

URINARY SYSTEM

Kidney				
Fibrous Histiocytoma, Metastatic, Skin	(50)	(50)	(50)	(50)
Histiocytic Sarcoma			3 (6%)	1 (2%)
Urinary Bladder	(50)	(49)	(50)	3 (6%)
Histiocytic Sarcoma				(50)
Sarcoma Stromal, Metastatic, Uterus	1 (2%)			3 (6%)

SYSTEMIC LESIONS

Multiple Organs	* (50)	* (50)	* (50)	* (50)
Histiocytic Sarcoma			5 (10%)	3 (6%)
Lymphoma Malignant	8 (16%)	9 (18%)	5 (10%)	10 (20%)

* Number of animals with any tissue examined microscopically

NTP Experiment-Test: 88138-04 INCIDENCE RATES OF NEOPLASMS BY ANATOMIC SITE (SYSTEMIC LESIONS ABRIDGED) (a)
 Study Type: CHRONIC BENZOPHENONE
 Route: DOSED FEED

Report: PEIRPT05
 Date: 06/24/03
 Time: 08:31:29

B6C3F1 MICE FEMALE 0 PPM 312 PPM 625 PPM 1250 PPM

TUMOR SUMMARY

Total Animals with Primary Neoplasms (b)	25	28	32	30
Total Primary Neoplasms	34	39	49	45
Total Animals with Benign Neoplasms	15	17	19	19
Total Benign Neoplasms	18	23	25	24
Total Animals with Malignant Neoplasms	16	13	18	20
Total Malignant Neoplasms	16	16	24	21
Total Animals with Metastatic Neoplasms	3	2	3	6
Total Metastatic Neoplasms	10	7	3	31
Total Animals with Malignant Neoplasms Uncertain Primary Site			1	
Total Animals with Neoplasms Uncertain- Benign or Malignant				
Total Uncertain Neoplasms				

a Number of animals examined microscopically at site and number of animals with lesion
 b Primary tumors: all tumors except metastatic tumors

B6C3F1 MICE MALE

0 PPM

312 PPM

625 PPM

1250 PPM

DISPOSITION SUMMARY

Disposition	0 PPM	312 PPM	625 PPM	1250 PPM
Animals Initially in Study	50	50	50	50
Early Deaths				
Moribund Sacrifice	5	3	5	2
Natural Death	1	3	1	3
Survivors				
Terminal Sacrifice	44	44	44	45
Animals Examined Microscopically	50	50	50	50

ALIMENTARY SYSTEM

Gallbladder	(45)	(49)	(49)	(49)
Intestine Large, Cecum	(50)	(50)	(50)	(50)
Intestine Small, Duodenum	(50)	(50)	(50)	(50)
Polyp Adenomatous			1 (2%)	
Intestine Small, Jejunum	(50)	(50)	(50)	(50)
Carcinoma				1 (2%)
Liver	(50)	(50)	(50)	(50)
Hemangiosarcoma		1 (2%)		
Hemangiosarcoma, Metastatic, Spleen		1 (2%)		
Hepatoblastoma		1 (2%)		
Hepatocellular Carcinoma	6 (12%)	5 (10%)	1 (2%)	3 (6%)
Hepatocellular Carcinoma, Multiple	2 (4%)	2 (4%)	4 (8%)	6 (12%)
Hepatocellular Adenoma	9 (18%)	7 (14%)	15 (30%)	11 (22%)
Hepatocellular Adenoma, Multiple	2 (4%)	8 (16%)	8 (16%)	12 (24%)
Ito Cell Tumor Benign			1 (2%)	
Mesentery		(2)	(8)	(5)
Fat, Hemangiosarcoma, Metastatic, Spleen		1 (50%)		
Pancreas	(50)	(50)	(50)	(50)
Stomach, Forestomach	(50)	(50)	(50)	(50)
Squamous Cell Carcinoma			1 (2%)	
Squamous Cell Papilloma	1 (2%)	2 (4%)	3 (6%)	
Squamous Cell Papilloma, Multiple		1 (2%)		
Tongue		(1)		
Squamous Cell Carcinoma		1 (100%)		
Tooth	(20)	(31)	(33)	(21)
Odontoma	1 (5%)			1 (5%)

NTP Experiment-Test: 88138-04 INCIDENCE RATES OF NEOPLASMS BY ANATOMIC SITE (SYSTEMIC LESIONS ABRIDGED) (a)
 Study Type: CHRONIC
 Route: DOSED FEED

BENZOPHENONE

Report: PEIRPT05
 Date: 06/24/03
 Time: 08:31:29

B6C3F1 MICE MALE

0 PPM 312 PPM 625 PPM 1250 PPM

CARDIOVASCULAR SYSTEM

Blood Vessel	(50)	(50)	(50)	(50)
Aorta, Adventitia, Alveolar/Bronchiolar Carcinoma, Metastatic, Lung	1 (2%)	(50)	(50)	(50)
Heart	(50)	(50)	(50)	(50)
Alveolar/Bronchiolar Carcinoma, Metastatic, Lung	1 (2%)			
Hemangiosarcoma	1 (2%)			
Hemangiosarcoma, Metastatic, Liver		1 (2%)		

ENDOCRINE SYSTEM

Adrenal Cortex	(50)	(50)	(50)	(50)
Adrenal Medulla	(50)	(50)	(50)	(50)
Islets, Pancreatic	(50)	(50)	(50)	(50)
Adenoma		1 (2%)		
Thyroid Gland	(50)	(50)	(50)	(50)
Follicular Cell, Adenoma	1 (2%)		1 (2%)	

GENERAL BODY SYSTEM

None

GENITAL SYSTEM

Prostate	(50)	(50)	(50)	(50)
Adenoma	(50)	(50)	(50)	1 (2%)
Seminal Vesicle	(50)	(50)	(50)	(50)
Testes	(50)	(50)	(50)	(50)
Interstitial Cell, Adenoma		1 (2%)		1 (2%)

HEMATOPOIETIC SYSTEM

Bone Marrow	(49)	(50)	(50)	(50)
Hemangiosarcoma, Metastatic, Skeletal Muscle	1 (2%)			
Schwannoma Malignant, Metastatic, Skin	1 (2%)	(1)	(3)	(5)
Lymph Node	(1)			
Mediastinal, Alveolar/Bronchiolar Carcinoma, Metastatic, Lung	1 (100%)			

NTP Experiment-Test: 88138-04 INCIDENCE RATES OF NEOPLASMS BY ANATOMIC SITE (SYSTEMIC LESIONS ABRIDGED) (a)
 Study Type: CHRONIC
 Route: DOSED FEED

BENZOPHENONE

Report: PETRPT05
 Date: 06/24/03
 Time: 08:31:29

B6C3F1 MICE MALE

0 PPM 312 PPM 625 PPM 1250 PPM

HEMATOPOIETIC SYSTEM - cont	0 PPM	312 PPM	625 PPM	1250 PPM
Lymph Node, Mandibular	(48)	(50)	(49)	(47)
Lymph Node, Mesenteric	(49)	(50)	(49)	(48)
Spleen	(50)	(50)	(50)	(50)
Hemangiosarcoma	1 (2%)	1 (2%)	1 (2%)	
Thymus	(46)	(48)	(46)	(47)
Alveolar/Bronchiolar Carcinoma, Metastatic, Lung	1 (2%)			

INTEGUMENTARY SYSTEM

Skin	(50)	(50)	(50)	(50)
Subcutaneous Tissue, Histiocytic Sarcoma	1 (2%)			
Subcutaneous Tissue, Schwannoma Malignant	1 (2%)			

MUSCULOSKELETAL SYSTEM

Bone	(49)	(50)	(50)	(50)
Schwannoma Malignant, Metastatic, Skin	1 (2%)			
Skeletal Muscle	(1)	(1)	(2)	
Hemangiosarcoma	1 (100%)			
Hemangiosarcoma, Metastatic, Spleen			1 (100%)	
Squamous Cell Carcinoma, Metastatic, Stomach, Forestomach				1 (50%)

NERVOUS SYSTEM

None

RESPIRATORY SYSTEM

Lung	(50)	(50)	(50)	(50)
Alveolar/Bronchiolar Adenoma	10 (20%)	9 (18%)	4 (8%)	8 (16%)
Alveolar/Bronchiolar Adenoma, Multiple	4 (8%)	2 (4%)	2 (4%)	1 (2%)
Alveolar/Bronchiolar Carcinoma	2 (4%)		1 (2%)	
Carcinoma, Metastatic, Harderian Gland	1 (2%)	1 (2%)		
Hepatoblastoma, Metastatic, Liver		1 (2%)		
Hepatocellular Carcinoma, Metastatic, Liver	2 (4%)	1 (2%)	2 (4%)	2 (4%)
Hepatocellular Carcinoma, Metastatic, Liver		1 (2%)		
Mediastinum, Alveolus, Alveolar/Bronchiolar Carcinoma, Metastatic, Lung	1 (2%)			1 (2%)

NTP Experiment-Test: 88138-04 INCIDENCE RATES OF NEOPLASMS BY ANATOMIC SITE (SYSTEMIC LESIONS ABRIDGED) (a)
 Study Type: CHRONIC BENZOPHENONE
 Route: DOSED FEED

Report: PEIRPT05
 Date: 06/24/03
 Time: 08:31:29

B6C3F1 MICE MALE 0 PPM 312 PPM 625 PPM 1250 PPM

SPECIAL SENSES SYSTEM

Harderian Gland	(50)	(50)	(50)	(50)
Adenoma	6 (12%)	6 (12%)	4 (8%)	4 (8%)
Carcinoma	1 (2%)	1 (2%)		

URINARY SYSTEM

Kidney	(50)	(50)	(50)	(50)
--------	------	------	------	------

SYSTEMIC LESIONS

Multiple Organs	*(50)	*(50)	*(50)	*(50)
Histiocytic Sarcoma	1 (2%)			
Lymphoma Malignant	2 (4%)		2 (4%)	3 (6%)

* Number of animals with any tissue examined microscopically

NTP Experiment-Test: 88138-04 INCIDENCE RATES OF NEOPLASMS BY ANATOMIC SITE (SYSTEMIC LESIONS ABRIDGED) (a)
 Study Type: CHRONIC BENZOPHENONE
 Route: DOSED FEED

Report: PETRPT05
 Date: 06/24/03
 Time: 08:31:29

B6C3F1 MICE MALE

0 PPM 312 PPM 625 PPM 1250 PPM

TUMOR SUMMARY

Total Animals with Primary Neoplasms (b)	38	30	34	35
Total Primary Neoplasms	52	46	52	52
Total Animals with Benign Neoplasms	27	23	30	27
Total Benign Neoplasms	34	36	40	39
Total Animals with Malignant Neoplasms	17	10	11	13
Total Malignant Neoplasms	18	10	12	13
Total Animals with Metastatic Neoplasms	6	5	3	3
Total Metastatic Neoplasms	11	7	3	3
Total Animals with Malignant Neoplasms Uncertain Primary Site				
Total Animals with Neoplasms Uncertain- Benign or Malignant				
Total Uncertain Neoplasms				

a Number of animals examined microscopically at site and number of animals with lesion
 b Primary tumors: all tumors except metastatic tumors

NTP
LAB: Battelle Columbus
EXPERIMENT: 88138 TEST: 04
TEST TYPE: CHRONIC
CONT: N01-ES-55388
PATHOLOGIST: MISSING

STATISTICAL ANALYSIS OF PRIMARY TUMORS
BENZOPHENONE
CAGES FROM 0000 TO LAST CAGE
ROUTE: DOSED FEED

REPORT: PEIRPT08
DATE: 06/24/03
TIME: 08:31:44
PAGE: 1
NTP #: 881388
CAS: 119-61-9

FINAL#1/MICE

REASONS FOR REMOVAL: ALL

REMOVAL DATE RANGE: ALL

TREATMENT GROUPS: INCLUDE ALL

NTP
LAB: Battelle Columbus
EXPERIMENT: 88138 TEST: 04
TEST TYPE: CHRONIC
CONT: N01-ES-55388
PATHOLOGIST: MISSING
Mice(B6C3F1)

STATISTICAL ANALYSIS OF PRIMARY TUMORS
BENZOPHENONE

CAGES FROM 0000 TO LAST CAGE
ROUTE: DOSED FEED

REPORT: PEIRPT08
DATE: 06/24/03
TIME: 08:31:44
NTP C#: 881388
CAS: 119-61-9

FOR ALL DOSES THE TUMOR RATES IN THE FOLLOWING TISSUES/ORGANS ARE
BASED ON NUMBER OF TISSUES EXAMINED. IN OTHER TISSUES/ORGANS RATES
ARE BASED ON THE NUMBER OF ANIMALS NECROPSIED.

- Adrenal Cortex
- Adrenal Medulla
- Bone Marrow
- Heart
- Islets, Pancreatic
- Liver
- Lung
- Nose
- Ovary
- pituitary Gland
- prostate
- Spleen
- Testes
- Thymus
- Thyroid Gland

NTP
LAB: Battelle Columbus
EXPERIMENT: 88138 TEST: 04
TEST TYPE: CHRONIC
CONT: N01-ES-55388
PATHOLOGIST: MISSING

STATISTICAL ANALYSIS OF PRIMARY TUMORS
BENZOPHENONE
CAGES FROM 0000 TO LAST CAGE
ROUTE: DOSED FEED

REPORT: PEIRPT08
DATE: 06/24/03
TIME: 08:31:44
NTP C#: 88138B
CAS: 119-61-9

SUMMARY OF STATISTICALLY SIGNIFICANT (P<=.05) RESULTS
IN THE ANALYSIS OF BENZOPHENONE

Male Mice

Organ

Liver

Morphology

Hepatoblastoma
Hepatocellular Adenoma
Hepatocellular Carcinoma or Hepatocellular Adenoma
Hepatocellular Carcinoma, Hepatocellular Adenoma, or Hepatoblastoma
Alveolar/Bronchiolar Adenoma
Alveolar/Bronchiolar Carcinoma or Alveolar/Bronchiolar Adenoma
Malignant Tumors

All Organs

Female Mice

Organ

Liver

Morphology

Hepatocellular Adenoma
Hepatocellular Carcinoma or Hepatocellular Adenoma
Hepatocellular Carcinoma, Hepatocellular Adenoma, or Hepatoblastoma
Alveolar/Bronchiolar Adenoma
Polyp Stromal
Sarcoma Stromal or Polyp Stromal
Histiocytic Sarcoma
Malignant Tumors
Malignant and Benign Tumors

All Organs

Dose	Males			Females		
	0 PPM	312 PPM	1250 PPM	0 PPM	312 PPM	1250 PPM
Adrenal Medulla						
Pheochromocytoma Benign						

TUMOR RATES	Males			Females		
	0 PPM	312 PPM	1250 PPM	0 PPM	312 PPM	1250 PPM
OVERALL (a)	0/50 (0%)	0/50 (0%)	0/50 (0%)	1/50 (2%)	1/50 (2%)	0/50 (0%)
POLY-3 RATE (b)	0/47.92	0/47.23	0/48.41	1/46.52	1/46.76	0/46.69
POLY-3 PERCENT (g)	0.0%	0.0%	0.0%	2.2%	2.1%	0.0%
TERMINAL (d)	0/44 (0%)	0/44 (0%)	0/44 (0%)	1/40 (3%)	1/42 (2%)	0/41 (0%)
FIRST INCIDENCE	---	---	---	729 (T)	729 (T)	---
STATISTICAL TESTS						
LIFE TABLE	(e)	(e)	(e)	(e)	(e)	(e)
POLY 3	(e)	(e)	(e)	P=0.287	P=0.751N	P=0.495N
POLY 1.5	(e)	(e)	(e)	P=0.346	P=0.759N	P=0.469N
LOGISTIC REGRESSION	(e)	(e)	(e)	P=0.352	P=0.760N	P=0.500N
COCH-ARM / FISHERS	(e)	(e)	(e)	P=0.341	P=0.758N	P=0.498N
ORDER RESTRICTED	(e)	(e)	(e)	P=0.287	P=0.751N	(e)
	(e)	(e)	(e)	P=0.360	P=0.753N	P=0.500N
	(e)	(e)	(e)	P=0.238	(e)	(e)

Dose	Males			Females		
	0 PPM	312 PPM	1250 PPM	0 PPM	312 PPM	1250 PPM
Harderian Gland						
Adenoma						

TUMOR RATES	Males			Females		
	0 PPM	312 PPM	1250 PPM	0 PPM	312 PPM	1250 PPM
OVERALL (a)	6/50 (12%)	6/50 (12%)	4/50 (8%)	4/50 (8%)	3/50 (6%)	2/50 (4%)
POLY-3 RATE (b)	6/48.36	6/47.66	4/48.93	4/48.51	3/46.76	2/46.69
POLY-3 PERCENT (g)	12.4%	12.6%	8.2%	8.3%	6.4%	4.3%
TERMINAL (d)	4/44 (9%)	5/44 (11%)	2/44 (5%)	4/45 (9%)	3/42 (7%)	2/41 (5%)
FIRST INCIDENCE	652	606	585	730 (T)	729 (T)	729 (T)
STATISTICAL TESTS						
LIFE TABLE	P=0.254N	P=0.611	P=0.371N	P=0.360N	P=0.323	P=0.509
POLY 3	P=0.258N	P=0.610	P=0.363N	P=0.368N	P=0.307	P=0.501
POLY 1.5	P=0.259N	P=0.614	P=0.365N	P=0.368N	P=0.306	P=0.499
LOGISTIC REGRESSION	P=0.279N	P=0.605	P=0.363N	P=0.371N	P=0.309	P=0.281
COCH-ARM / FISHERS	P=0.262N	P=0.615N	P=0.403N	P=0.371N	P=0.323	P=0.345
ORDER RESTRICTED	P=0.390N	P=0.620N	P=0.370N	P=0.370N	P=0.309	P=0.500
	(e)	(e)	(e)	(e)	(e)	(e)

Statistical Analysis of Primary Tumors in Mice (B6C3F1)
Terminal Sacrifice at 105 weeks

BENZOPHENONE

Dose	Males				Females			
	0 PPM	312 PPM	625 PPM	1250 PPM	0 PPM	312 PPM	625 PPM	1250 PPM

Harderian Gland
Carcinoma or Adenoma

TUMOR RATES	Males				Females			
	#	#	#	#	#	#	#	#
OVERALL (a)	7/50 (14%)	7/50 (14%)	4/50 (8%)	4/50 (8%)	1/50 (2%)	3/50 (6%)	2/50 (4%)	4/50 (8%)
POLY-3 RATE (b)	7/48.47	7/47.66	4/48.93	4/48.51	1/46.52	3/46.76	2/46.69	4/44.33
POLY-3 PERCENT (g)	14.4%	14.7%	8.2%	8.3%	2.2%	6.4%	4.3%	9.0%
TERMINAL (d)	4/44 (9%)	6/44 (14%)	2/44 (5%)	4/45 (9%)	1/40 (3%)	3/42 (7%)	2/41 (5%)	2/31 (7%)
FIRST INCIDENCE	652	606	585	730 (T)	729 (T)	729 (T)	729 (T)	536

STATISTICAL TESTS

LIFE TABLE	Males				Females			
	P=0.157N	P=0.602	P=0.268N	P=0.257N	P=0.098	P=0.323	P=0.509	P=0.136
POLY 3	P=0.158N	P=0.600	P=0.257N	P=0.261N	P=0.147	P=0.307	P=0.501	P=0.164
POLY 1.5	P=0.158N	P=0.605	P=0.258N	P=0.261N	P=0.153	P=0.306	P=0.499	P=0.170
POLY 6	P=0.159N	P=0.592	P=0.258N	P=0.265N	P=0.141	P=0.309	P=0.503	P=0.158
LOGISTIC REGRESSION	P=0.172N	P=0.608N	P=0.290N	P=0.265N	P=0.160	P=0.323	P=0.509	P=0.198
COCH-ARM / FISHERS	P=0.160N	P=0.613N	P=0.262N	P=0.262N	P=0.162	P=0.309	P=0.500	P=0.181
ORDER RESTRICTED	P=0.258N	(e)	(e)	(e)	P=0.116	(e)	(e)	(e)

Intestine Small: Duodenum
Polyp Adenomatous

TUMOR RATES	Males				Females			
	#	#	#	#	#	#	#	#
OVERALL (a)	0/50 (0%)	0/50 (0%)	1/50 (2%)	0/50 (0%)	1/50 (2%)	0/50 (0%)	3/50 (6%)	0/50 (0%)
POLY-3 RATE (b)	0/47.92	0/47.23	1/48.44	0/48.51	1/46.52	0/46.76	3/46.69	0/43.42
POLY-3 PERCENT (g)	0.0%	0.0%	2.1%	0.0%	2.2%	0.0%	6.4%	0.0%
TERMINAL (d)	0/44 (0%)	0/44 (0%)	0/44 (0%)	0/45 (0%)	1/40 (3%)	0/42 (0%)	3/41 (7%)	0/31 (0%)
FIRST INCIDENCE	---	---	722	---	729 (T)	---	729 (T)	---

STATISTICAL TESTS

LIFE TABLE	Males				Females			
	P=0.697	P=0.504	P=0.504	P=0.504	P=0.580N	P=0.490N	P=0.314	P=0.551N
POLY 3	P=0.700	P=0.502	P=0.502	P=0.502	P=0.533N	P=0.499N	P=0.307	P=0.514N
POLY 1.5	P=0.698	P=0.502	P=0.502	P=0.502	P=0.520N	P=0.500N	P=0.305	P=0.508N
POLY 6	P=0.702	P=0.502	P=0.502	P=0.502	P=0.549N	P=0.498N	P=0.309	P=0.520N
LOGISTIC REGRESSION	P=0.696	P=0.501	P=0.501	P=0.501	P=0.580N	P=0.500N	P=0.314	P=0.500N
COCH-ARM / FISHERS	P=0.694	P=0.500N	P=0.500N	P=0.500N	P=0.500N	P=0.500N	P=0.309	P=0.500N
ORDER RESTRICTED	P=0.383	(e)	(e)	(e)	P=0.282N	(e)	(e)	(e)

Dose	Males				Females			
	0 PPM	312 PPM	625 PPM	1250 PPM	0 PPM	312 PPM	625 PPM	1250 PPM

Liver
 Hepatocellular Adenoma

TUMOR RATES

OVERALL (a)	11/50 (22%)	15/50 (30%)	23/50 (46%)	23/50 (46%)	5/50 (10%)	4/50 (8%)	10/50 (20%)	8/50 (16%)
POLY-3 RATE (b)	11/48.02	15/47.66	23/49.09	23/49.32	5/46.52	4/46.95	10/46.69	8/44.20
POLY-3 PERCENT (g)	22.9%	31.5%	46.9%	46.6%	10.8%	8.5%	21.4%	18.1%
TERMINAL (d)	10/44 (23%)	14/44 (32%)	21/44 (48%)	21/45 (47%)	5/40 (13%)	3/42 (7%)	10/41 (24%)	7/31 (23%)
FIRST INCIDENCE	703	606	585	568	729 (T)	680	729 (T)	435

STATISTICAL TESTS

LIFE TABLE	P=0.007 **	P=0.248	P=0.011 *	P=0.014 *	P=0.046 *	P=0.471N	P=0.139	P=0.143
POLY 3	P=0.006 **	P=0.239	P=0.010 *	P=0.011 *	P=0.109	P=0.494N	P=0.131	P=0.243
POLY 1.5	P=0.005 **	P=0.242	P=0.010 *	P=0.010 *	P=0.120	P=0.498N	P=0.129	P=0.256
POLY 6	P=0.007 **	P=0.236	P=0.011 *	P=0.012 *	P=0.095	P=0.489N	P=0.133	P=0.225
LOGISTIC REGRESSION	P=0.006 **	P=0.230	P=0.011 *	P=0.011 *	P=0.107	P=0.494N	P=0.139	P=0.250
COCH-ARM / FISHERS	P=0.005 **	P=0.247	P=0.010 *	P=0.010 *	P=0.139	P=0.500N	P=0.131	P=0.277
ORDER RESTRICTED	P=0.009 **	(e)	(e)	(e)	P=0.134	(e)	(e)	(e)

Dose	Males				Females			
	0 PPM	312 PPM	625 PPM	1250 PPM	0 PPM	312 PPM	625 PPM	1250 PPM

Liver
 Hepatocellular Carcinoma

TUMOR RATES

OVERALL (a)	8/50 (16%)	5/50 (10%)	6/50 (12%)	6/50 (12%)	0/50 (0%)	1/50 (2%)	0/50 (0%)	1/50 (2%)
POLY-3 RATE (b)	8/48.51	5/48.70	6/48.60	6/48.93	0/46.52	1/46.76	0/46.69	1/43.48
POLY-3 PERCENT (g)	16.5%	10.3%	12.3%	12.3%	0.0%	2.1%	0.0%	2.3%
TERMINAL (d)	7/44 (16%)	2/44 (5%)	5/44 (11%)	4/45 (9%)	0/40 (0%)	1/42 (2%)	0/41 (0%)	0/31 (0%)
FIRST INCIDENCE	540	449	679	656	---	729 (T)	---	712

STATISTICAL TESTS

LIFE TABLE	P=0.385N	P=0.282N	P=0.387N	P=0.372N	P=0.355	P=0.510	(e)	P=0.463
POLY 3	P=0.396N	P=0.274N	P=0.386N	P=0.381N	P=0.389	P=0.501	(e)	P=0.487
POLY 1.5	P=0.398N	P=0.275N	P=0.386N	P=0.383N	P=0.395	P=0.500	(e)	P=0.492
POLY 6	P=0.394N	P=0.273N	P=0.387N	P=0.377N	P=0.381	P=0.502	(e)	P=0.480
LOGISTIC REGRESSION	P=0.474N	P=0.228N	P=0.401N	P=0.414N	P=0.384	P=0.510	(e)	P=0.488
COCH-ARM / FISHERS	P=0.400N	P=0.277N	P=0.387N	P=0.387N	P=0.405	P=0.500	(e)	P=0.500
ORDER RESTRICTED	P=0.378N	(e)	(e)	(e)	P=0.239	(e)	(e)	(e)

Dose	Males				Females			
	0 PPM	312 PPM	625 PPM	1250 PPM	0 PPM	312 PPM	625 PPM	1250 PPM

Liver
 Hepatocellular Carcinoma or Hepatoblastoma

TUMOR RATES	Males				Females			
	0 PPM	312 PPM	625 PPM	1250 PPM	0 PPM	312 PPM	625 PPM	1250 PPM
OVERALL (a)	8/50 (16%)	6/50 (12%)	6/50 (12%)	9/50 (18%)	0/50 (0%)	1/50 (2%)	0/50 (0%)	1/50 (2%)
POLY-3 RATE (b)	8/48.51	6/48.70	6/48.60	9/49.35	0/46.52	1/46.76	0/46.69	1/43.48
POLY-3 PERCENT (g)	16.5%	12.3%	12.3%	18.2%	0.0%	2.1%	0.0%	2.3%
TERMINAL (d)	7/44 (16%)	3/44 (7%)	5/44 (11%)	6/45 (13%)	0/40 (0%)	1/42 (2%)	0/41 (0%)	0/31 (0%)
FIRST INCIDENCE	540	449	679	606	---	729 (T)	---	712
STATISTICAL TESTS								
LIFE TABLE	P=0.404	P=0.390N	P=0.387N	P=0.520	P=0.355	P=0.510	(e)	P=0.463
POLY 3	P=0.393	P=0.384N	P=0.386N	P=0.515	P=0.389	P=0.501	(e)	P=0.487
POLY 1.5	P=0.388	P=0.385N	P=0.386N	P=0.509	P=0.395	P=0.500	(e)	P=0.492
POLY 6	P=0.399	P=0.383N	P=0.387N	P=0.524	P=0.381	P=0.502	(e)	P=0.480
LOGISTIC REGRESSION	P=0.302	P=0.339N	P=0.401N	P=0.458	P=0.384	P=0.510	(e)	P=0.488
COCH-ARM / FISHERS	P=0.380	P=0.387N	P=0.387N	P=0.500	P=0.405	P=0.500	(e)	P=0.500
ORDER RESTRICTED	P=0.421	(e)	(e)	(e)	P=0.239	(e)	(e)	(e)

Liver
 Hepatocellular Carcinoma or Hepatocellular Adenoma

TUMOR RATES	Males				Females			
	0 PPM	312 PPM	625 PPM	1250 PPM	0 PPM	312 PPM	625 PPM	1250 PPM
OVERALL (a)	18/50 (36%)	20/50 (40%)	25/50 (50%)	27/50 (54%)	5/50 (10%)	5/50 (10%)	10/50 (20%)	9/50 (18%)
POLY-3 RATE (b)	18/48.62	20/49.13	25/49.09	27/49.45	5/46.52	5/46.95	10/46.69	9/44.27
POLY-3 PERCENT (g)	37.0%	40.7%	50.9%	54.6%	10.8%	10.7%	21.4%	20.3%
TERMINAL (d)	16/44 (36%)	16/44 (36%)	23/44 (52%)	24/45 (53%)	5/40 (13%)	4/42 (10%)	10/41 (24%)	7/31 (23%)
FIRST INCIDENCE	540	449	585	568	729 (T)	680	729 (T)	435
STATISTICAL TESTS								
LIFE TABLE	P=0.048 *	P=0.422	P=0.121	P=0.076	P=0.031 *	P=0.601N	P=0.139	P=0.090
POLY 3	P=0.034 *	P=0.434	P=0.118	P=0.060	P=0.081	P=0.624N	P=0.131	P=0.165
POLY 1.5	P=0.033 *	P=0.429	P=0.116	P=0.057	P=0.089	P=0.627N	P=0.129	P=0.176
POLY 6	P=0.036 *	P=0.441	P=0.118	P=0.063	P=0.070	P=0.619N	P=0.133	P=0.151
LOGISTIC REGRESSION	P=0.027 *	P=0.436	P=0.115	P=0.054	P=0.077	P=0.625N	P=0.139	P=0.170
COCH-ARM / FISHERS	P=0.030 *	P=0.418	P=0.113	P=0.054	P=0.105	P=0.630N	P=0.131	P=0.194
ORDER RESTRICTED	P=0.057	(e)	(e)	(e)	P=0.144	(e)	(e)	(e)

Statistical Analysis of Primary Tumors in Mice(B6C3F1)
Terminal Sacrifice at 105 weeks

BENZOPHENONE

Dose	Males				Females			
	0 PPM	312 PPM	625 PPM	1250 PPM	0 PPM	312 PPM	625 PPM	1250 PPM

Liver
Hepatocellular Carcinoma, Hepatocellular Adenoma,
or Hepatoblastoma

TUMOR RATES

OVERALL (a)	18/50 (36%)	20/50 (40%)	25/50 (50%)	29/50 (58%)	5/50 (10%)	5/50 (10%)	10/50 (20%)	9/50 (18%)
POLY-3 RATE (b)	18/48.62	20/49.13	25/49.09	29/49.88	5/46.52	5/46.95	10/46.69	9/44.27
POLY-3 PERCENT (c)	37.0%	40.7%	50.9%	58.1%	10.8%	10.7%	21.4%	20.3%
TERMINAL (d)	16/44 (36%)	16/44 (36%)	23/44 (52%)	25/45 (56%)	5/40 (13%)	4/42 (10%)	10/41 (24%)	7/31 (23%)
FIRST INCIDENCE	540	449	585	568	729 (T)	680	729 (T)	435

STATISTICAL TESTS

LIFE TABLE	P=0.020 *	P=0.422	P=0.121	P=0.038 *	P=0.031 *	P=0.601N	P=0.139	P=0.090
POLY 3	P=0.013 *	P=0.434	P=0.118	P=0.027 *	P=0.081	P=0.624N	P=0.131	P=0.165
POLY 1.5	P=0.012 *	P=0.429	P=0.116	P=0.024 *	P=0.089	P=0.627N	P=0.129	P=0.176
POLY 6	P=0.015 *	P=0.441	P=0.118	P=0.030 *	P=0.070	P=0.619N	P=0.133	P=0.151
LOGISTIC REGRESSION	P=0.009 **	P=0.436	P=0.115	P=0.021 *	P=0.077	P=0.625N	P=0.139	P=0.170
COCH-ARM / FISHERS	P=0.011 *	P=0.418	P=0.113	P=0.022 *	P=0.105	P=0.630N	P=0.131	P=0.194
ORDER RESTRICTED	P=0.023 *	(e)	(e)	(e)	P=0.144	(e)	(e)	(e)

Dose	Males				Females			
	0 PPM	312 PPM	625 PPM	1250 PPM	0 PPM	312 PPM	625 PPM	1250 PPM

Lung
Alveolar/Bronchiolar Adenoma

TUMOR RATES

OVERALL (a)	14/50 (28%)	11/50 (22%)	6/50 (12%)	9/50 (18%)	0/50 (0%)	5/50 (10%)	2/50 (4%)	3/50 (6%)
POLY-3 RATE (b)	14/48.07	11/48.05	6/48.44	9/48.51	0/46.52	5/47.68	2/46.59	3/43.73
POLY-3 PERCENT (c)	29.1%	22.9%	12.4%	18.6%	0.0%	10.5%	4.3%	6.9%
TERMINAL (d)	13/44 (30%)	9/44 (21%)	5/44 (11%)	9/45 (20%)	0/40 (0%)	4/42 (10%)	2/41 (5%)	1/31 (3%)
FIRST INCIDENCE	690	606	722	730 (T)	---	316	729 (T)	672

STATISTICAL TESTS

LIFE TABLE	P=0.108N	P=0.330N	P=0.042N*	P=0.156N	P=0.207	P=0.038 *	P=0.244	P=0.095
POLY 3	P=0.110N	P=0.322N	P=0.036N*	P=0.163N	P=0.260	P=0.033 *	P=0.238	P=0.108
POLY 1.5	P=0.111N	P=0.323N	P=0.037N*	P=0.166N	P=0.271	P=0.032 *	P=0.237	P=0.112
POLY 6	P=0.110N	P=0.320N	P=0.036N*	P=0.163N	P=0.247	P=0.033 *	P=0.239	P=0.103
LOGISTIC REGRESSION	P=0.108N	P=0.330N	P=0.037N*	P=0.158N	P=0.321	P=0.032 *	P=0.244	P=0.115
COCH-ARM / FISHERS	P=0.116N	P=0.322N	P=0.039N*	P=0.171N	P=0.292	P=0.028 *	P=0.247	P=0.121
ORDER RESTRICTED	P=0.072N	(e)	(e)	(e)	P=0.100	(e)	(e)	(e)

Dose	Males				Females			
	0 PPM	312 PPM	625 PPM	1250 PPM	0 PPM	312 PPM	625 PPM	1250 PPM

Lung
 Alveolar/Bronchiolar Carcinoma

TUMOR RATES	Males				Females			
	0 PPM	312 PPM	625 PPM	1250 PPM	0 PPM	312 PPM	625 PPM	1250 PPM
OVERALL (a)	2/50 (4%)	0/50 (0%)	1/50 (2%)	0/50 (0%)	1/50 (2%)	0/50 (0%)	0/50 (0%)	0/50 (0%)
POLY-3 RATE (b)	2/48.11	0/47.23	1/48.41	0/48.51	1/46.93	0/46.76	0/46.69	0/43.42
POLY-3 PERCENT (g)	4.2%	0.0%	2.1%	0.0%	2.1%	0.0%	0.0%	0.0%
TERMINAL (d)	1/44 (2%)	0/44 (0%)	1/44 (2%)	0/45 (0%)	0/40 (0%)	0/42 (0%)	0/41 (0%)	0/31 (0%)
FIRST INCIDENCE	679	---	730 (T)	---	610	---	---	---
STATISTICAL TESTS								
LIFE TABLE	P=0.187N	P=0.245N	P=0.500N	P=0.237N	P=0.310N	P=0.500N	P=0.496N	P=0.509N
POLY 3	P=0.185N	P=0.241N	P=0.498N	P=0.235N	P=0.297N	P=0.501N	P=0.501N	P=0.516N
POLY 1.5	P=0.186N	P=0.240N	P=0.498N	P=0.236N	P=0.301N	P=0.501N	P=0.501N	P=0.509N
POLY 6	P=0.184N	P=0.244N	P=0.499N	P=0.236N	P=0.292N	P=0.501N	P=0.501N	P=0.523N
LOGISTIC REGRESSION	P=0.191N	P=0.233N	P=0.507N	P=0.248N	P=0.274N	P=0.480N	P=0.464N	P=0.442N
COCH-ARM / FISHERS	P=0.188N	P=0.247N	P=0.500N	P=0.247N	P=0.306N	P=0.500N	P=0.500N	P=0.500N
ORDER RESTRICTED	P=0.073N	(e)	(e)	(e)	P=0.135N	(e)	(e)	(e)

Dose	Males				Females			
	0 PPM	312 PPM	625 PPM	1250 PPM	0 PPM	312 PPM	625 PPM	1250 PPM

Lung
 Alveolar/Bronchiolar Carcinoma or Alveolar/Bronchiolar Adenoma

TUMOR RATES	Males				Females			
	0 PPM	312 PPM	625 PPM	1250 PPM	0 PPM	312 PPM	625 PPM	1250 PPM
OVERALL (a)	16/50 (32%)	11/50 (22%)	7/50 (14%)	9/50 (18%)	1/50 (2%)	5/50 (10%)	2/50 (4%)	3/50 (6%)
POLY-3 RATE (b)	16/48.27	11/48.05	7/48.44	9/48.51	1/46.93	5/47.68	2/46.69	3/43.73
POLY-3 PERCENT (g)	33.2%	22.9%	14.5%	18.6%	2.1%	10.5%	4.3%	6.9%
TERMINAL (d)	14/44 (32%)	9/44 (21%)	6/44 (14%)	9/45 (20%)	0/40 (0%)	4/42 (10%)	2/41 (5%)	1/31 (3%)
FIRST INCIDENCE	679	606	722	730 (T)	610	316	729 (T)	672
STATISTICAL TESTS								
LIFE TABLE	P=0.058N	P=0.196N	P=0.032N*	P=0.077N	P=0.342	P=0.115	P=0.508	P=0.260
POLY 3	P=0.057N	P=0.186N	P=0.025N*	P=0.078N	P=0.396	P=0.105	P=0.498	P=0.280
POLY 1.5	P=0.058N	P=0.185N	P=0.026N*	P=0.079N	P=0.411	P=0.105	P=0.498	P=0.290
POLY 6	P=0.058N	P=0.186N	P=0.026N*	P=0.079N	P=0.378	P=0.105	P=0.498	P=0.269
LOGISTIC REGRESSION	P=0.057N	P=0.188N	P=0.026N*	P=0.076N	P=0.482	P=0.101	P=0.505	P=0.323
COCH-ARM / FISHERS	P=0.062N	P=0.184N	P=0.028N*	P=0.083N	P=0.438	P=0.102	P=0.500	P=0.309
ORDER RESTRICTED	P=0.032N*	(e)	(e)	(e)	P=0.245	(e)	(e)	(e)

Statistical Analysis of Primary Tumors in Mice(BCC3F1)
Terminal Sacrifice at 105 weeks

BENZOPHENONE

Dose	Males				Females			
	0 PPM	312 PPM	625 PPM	1250 PPM	0 PPM	312 PPM	625 PPM	1250 PPM

Ovary
Cystadenoma

TUMOR RATES								
STATISTICAL TESTS								
LIFE TABLE								
OVERALL (a)	1/49 (2%)	3/50 (6%)	3/50 (6%)	2/50 (4%)	1/46 (42)	3/46 (76)	3/46 (69)	2/43 (51)
POLY-3 RATE (b)	2.2%	6.4%	6.4%	4.6%	0/40 (0%)	3/42 (7%)	3/41 (7%)	4.6%
POLY-3 PERCENT (g)	0/40 (0%)	3/42 (7%)	3/41 (7%)	1/31 (3%)	708	729 (T)	729 (T)	705
TERMINAL (d)								
FIRST INCIDENCE								
STATISTICAL TESTS								
LIFE TABLE								
POLY 3	P=0.363	P=0.318	P=0.309	P=0.422	P=0.433	P=0.308	P=0.307	P=0.477
POLY 1.5	P=0.452	P=0.309	P=0.308	P=0.488	P=0.411	P=0.308	P=0.308	P=0.465
POLY 6	P=0.420	P=0.308	P=0.308	P=0.479	P=0.484	P=0.308	P=0.308	P=0.479
LOGISTIC REGRESSION	P=0.338	P=0.316	P=0.316	P=0.508				
COCH-ARM / FISHERS								
ORDER RESTRICTED								
TUMOR RATES								
STATISTICAL TESTS								
LIFE TABLE								
OVERALL (a)	0/48 (0%)	0/49 (0%)	0/50 (0%)	0/50 (0%)	0/45.92	0/46.80	0/48.41	0/48.51
POLY-3 RATE (b)	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
POLY-3 PERCENT (g)	0/42 (0%)	0/44 (0%)	0/44 (0%)	0/45 (0%)	2/50 (4%)	0/46 (76)	2/45 (69)	3/41 (76)
TERMINAL (d)					4.3%	0.0%	4.4%	7.2%
FIRST INCIDENCE					2/40 (5%)	0/42 (0%)	2/40 (5%)	0/30 (0%)
					729 (T)	---	729 (T)	672
STATISTICAL TESTS								
LIFE TABLE								
POLY 3	(e)	(e)	(e)	(e)	P=0.165	P=0.228N	P=0.695	P=0.411
POLY 1.5	(e)	(e)	(e)	(e)	P=0.202	P=0.236N	P=0.687	P=0.451
POLY 6	(e)	(e)	(e)	(e)	P=0.207	P=0.237N	P=0.685	P=0.459
LOGISTIC REGRESSION	(e)	(e)	(e)	(e)	P=0.196	P=0.235N	P=0.689	P=0.441
COCH-ARM / FISHERS	(e)	(e)	(e)	(e)	P=0.204	P=0.247N	P=0.695	P=0.463
ORDER RESTRICTED	(e)	(e)	(e)	(e)	P=0.215	P=0.247N	P=0.684	P=0.470

Pituitary Gland: Pars Distalis or Unspecified Site
Adenoma

Dose	Males				Females			
	0 PPM	312 PPM	625 PPM	1250 PPM	0 PPM	312 PPM	625 PPM	1250 PPM

Dose	Males			Females		
	0 PPM	312 PPM	625 PPM	0 PPM	312 PPM	1250 PPM

Skin
 Fibroma, Fibrosarcoma, Sarcoma, Myxoma, Myxosarcoma,
 or Fibrous Histiocytoma

TUMOR RATES	Males			Females		
	#	#	#	#	#	#
OVERALL (a)	0/50 (0%)	0/50 (0%)	0/50 (0%)	1/50 (2%)	4/50 (8%)	2/50 (4%)
POLY-3 RATE (b)	0/47.92	0/47.23	0/48.41	1/46.60	4/47.76	2/43.61
POLY-3 PERCENT (g)	0.0%	0.0%	0.0%	2.2%	8.4%	4.6%
TERMINAL (d)	0/44 (0%)	0/44 (0%)	0/44 (0%)	0/40 (0%)	1/42 (2%)	0/31 (0%)
FIRST INCIDENCE	---	---	---	709	729 (T)	704
STATISTICAL TESTS						
LIFE TABLE	(e)	(e)	(e)	(e)	(e)	(e)
POLY 3	(e)	(e)	(e)	P=0.242	P=0.755N	P=0.185
POLY 1.5	(e)	(e)	(e)	P=0.275	P=0.760N	P=0.187
POLY 6	(e)	(e)	(e)	P=0.289	P=0.760N	P=0.184
LOGISTIC REGRESSION	(e)	(e)	(e)	P=0.258	P=0.759N	P=0.189
COCH-ARM / FISHERS	(e)	(e)	(e)	P=0.371	P=0.761N	P=0.206
ORDER RESTRICTED	(e)	(e)	(e)	P=0.313	P=0.753N	P=0.181
	(e)	(e)	(e)	P=0.245	(e)	(e)

Dose	Males			Females		
	0 PPM	312 PPM	625 PPM	0 PPM	312 PPM	1250 PPM

Skin
 Fibrosarcoma

TUMOR RATES	Males			Females		
	#	#	#	#	#	#
OVERALL (a)	0/50 (0%)	0/50 (0%)	0/50 (0%)	1/50 (2%)	0/50 (0%)	4/50 (8%)
POLY-3 RATE (b)	0/47.92	0/47.23	0/48.41	1/46.60	0/46.76	4/47.76
POLY-3 PERCENT (g)	0.0%	0.0%	0.0%	2.2%	0.0%	8.4%
TERMINAL (d)	0/44 (0%)	0/44 (0%)	0/44 (0%)	0/40 (0%)	0/42 (0%)	2/41 (5%)
FIRST INCIDENCE	---	---	---	709	---	204
STATISTICAL TESTS						
LIFE TABLE	(e)	(e)	(e)	(e)	(e)	(e)
POLY 3	(e)	(e)	(e)	P=0.379	P=0.500N	P=0.185
POLY 1.5	(e)	(e)	(e)	P=0.397	P=0.499N	P=0.187
POLY 6	(e)	(e)	(e)	P=0.415	P=0.500N	P=0.184
LOGISTIC REGRESSION	(e)	(e)	(e)	P=0.375	P=0.499N	P=0.189
COCH-ARM / FISHERS	(e)	(e)	(e)	P=0.519	P=0.500N	P=0.206
ORDER RESTRICTED	(e)	(e)	(e)	P=0.444	P=0.500N	P=0.181
	(e)	(e)	(e)	P=0.188	(e)	(e)

Statistical Analysis of Primary Tumors in Mice(B6C3F1)
Terminal Sacrifice at 105 weeks

Dose	Males				Females			
	0 PPM	312 PPM	625 PPM	1250 PPM	0 PPM	312 PPM	625 PPM	1250 PPM

Skin
Fibrosarcoma, Sarcoma, Myxosarcoma, or Fibrous Histiocytoma

TUMOR RATES	#		#		#		#	
	0 PPM	312 PPM	625 PPM	1250 PPM	0 PPM	312 PPM	625 PPM	1250 PPM
OVERALL (a)	0/50 (0%)	0/50 (0%)	0/50 (0%)	0/50 (0%)	1/50 (2%)	0/50 (0%)	4/50 (8%)	2/50 (4%)
POLY-3 RATE (b)	0/47.92	0/47.23	0/48.41	0/48.51	1/46.60	0/46.76	4/47.76	2/43.61
POLY-3 PERCENT (g)	0.0%	0.0%	0.0%	0.0%	2.2%	0.0%	8.4%	4.6%
TERMINAL (d)	0/44 (0%)	0/44 (0%)	0/44 (0%)	0/45 (0%)	0/40 (0%)	0/42 (0%)	2/41 (5%)	0/31 (0%)
FIRST INCIDENCE	---	---	---	---	709	---	204	704

STATISTICAL TESTS

LIFE TABLE	#		#		#		#	
	0 PPM	312 PPM	625 PPM	1250 PPM	0 PPM	312 PPM	625 PPM	1250 PPM
POLY 3	(e)	(e)	(e)	(e)	P=0.182	P=0.500N	P=0.185	P=0.433
POLY 1.5	(e)	(e)	(e)	(e)	P=0.204	P=0.499N	P=0.187	P=0.477
POLY 6	(e)	(e)	(e)	(e)	P=0.216	P=0.500N	P=0.184	P=0.486
LOGISTIC REGRESSION	(e)	(e)	(e)	(e)	P=0.190	P=0.499N	P=0.189	P=0.466
COCH-ARM / FISHERS	(e)	(e)	(e)	(e)	P=0.294	P=0.500N	P=0.206	P=0.487
ORDER RESTRICTED	(e)	(e)	(e)	(e)	P=0.237	P=0.500N	P=0.181	P=0.500

Skin
Schwannoma Malignant

TUMOR RATES	#		#		#		#	
	0 PPM	312 PPM	625 PPM	1250 PPM	0 PPM	312 PPM	625 PPM	1250 PPM
OVERALL (a)	1/50 (2%)	0/50 (0%)	0/50 (0%)	0/50 (0%)	1/50 (2%)	2/50 (4%)	0/50 (0%)	0/50 (0%)
POLY-3 RATE (b)	1/48.66	0/47.23	0/48.41	0/48.51	1/46.52	2/47.39	0/46.69	0/43.42
POLY-3 PERCENT (g)	2.1%	0.0%	0.0%	0.0%	2.2%	4.2%	0.0%	0.0%
TERMINAL (d)	0/44 (0%)	0/44 (0%)	0/44 (0%)	0/45 (0%)	1/40 (3%)	1/42 (2%)	0/41 (0%)	0/31 (0%)
FIRST INCIDENCE	463	---	---	---	729 (T)	522	---	---

STATISTICAL TESTS

LIFE TABLE	#		#		#		#	
	0 PPM	312 PPM	625 PPM	1250 PPM	0 PPM	312 PPM	625 PPM	1250 PPM
POLY 3	P=0.306N	P=0.504N	P=0.500N	P=0.500N	P=0.215N	P=0.514	P=0.495N	P=0.551N
POLY 1.5	P=0.303N	P=0.506N	P=0.501N	P=0.501N	P=0.194N	P=0.506	P=0.499N	P=0.514N
POLY 6	P=0.304N	P=0.504N	P=0.501N	P=0.501N	P=0.192N	P=0.503	P=0.500N	P=0.508N
LOGISTIC REGRESSION	P=0.302N	P=0.508N	P=0.502N	P=0.501N	P=0.196N	P=0.510	P=0.498N	P=0.520N
COCH-ARM / FISHERS	P=0.769N	P=0.433N	(e)	(e)	P=0.167N	P=0.508	(e)	(e)
ORDER RESTRICTED	P=0.306N	P=0.500N	P=0.500N	P=0.500N	P=0.188N	P=0.500	P=0.500N	P=0.500N
	P=0.121N	(e)	(e)	(e)	P=0.185N	(e)	(e)	(e)

Dose	Males			Females		
	0 PPM	312 PPM	1250 PPM	0 PPM	312 PPM	1250 PPM

Stomach, Forestomach
 Squamous Cell Carcinoma or Papilloma Squamous

TUMOR RATES	Males			Females		
	#	#	#	#	#	#
OVERALL (a)	1/50 (2%)	3/50 (6%)	4/50 (8%)	0/50 (0%)	2/50 (4%)	1/50 (2%)
POLY-3 RATE (b)	1/47.92	3/47.23	4/48.59	0/48.51	2/46.52	1/43.42
POLY-3 PERCENT (g)	2.1%	6.4%	8.2%	0.0%	4.3%	2.3%
TERMINAL (d)	1/44 (2%)	3/44 (7%)	3/44 (7%)	0/45 (0%)	2/40 (5%)	1/31 (3%)
FIRST INCIDENCE	730 (T)	730 (T)	683	---	729 (T)	729 (T)
STATISTICAL TESTS						
LIFE TABLE	P=0.305N	P=0.305	P=0.182	P=0.496N	P=0.613N	P=0.589N
POLY 3	P=0.304N	P=0.300	P=0.183	P=0.498N	P=0.551N	P=0.524N
POLY 1.5	P=0.306N	P=0.303	P=0.182	P=0.498N	P=0.543N	P=0.515N
POLY 6	P=0.302N	P=0.298	P=0.184	P=0.497N	P=0.560N	P=0.536N
LOGISTIC REGRESSION	P=0.306N	P=0.305	P=0.180	(e)	P=0.574N	P=0.693N
COCH-ARM / FISHERS	P=0.313N	P=0.309	P=0.181	P=0.500N	P=0.531N	P=0.589N
ORDER RESTRICTED	(e)	(e)	(e)	(e)	P=0.431N	P=0.500N
=====						
Dose	0 PPM	312 PPM	625 PPM	1250 PPM	0 PPM	312 PPM
Males						
=====						
Females						
=====						

Stomach, Forestomach
 Squamous Cell Papilloma

TUMOR RATES	Males			Females		
	#	#	#	#	#	#
OVERALL (a)	1/50 (2%)	3/50 (6%)	3/50 (6%)	0/50 (0%)	1/50 (2%)	1/50 (2%)
POLY-3 RATE (b)	1/47.92	3/47.23	3/48.41	0/48.51	1/46.52	1/43.42
POLY-3 PERCENT (g)	2.1%	6.4%	6.2%	0.0%	2.2%	2.3%
TERMINAL (d)	1/44 (2%)	3/44 (7%)	3/44 (7%)	0/45 (0%)	1/40 (3%)	1/31 (3%)
FIRST INCIDENCE	730 (T)	730 (T)	730 (T)	---	729 (T)	729 (T)
STATISTICAL TESTS						
LIFE TABLE	P=0.272N	P=0.305	P=0.305	P=0.496N	P=0.428	P=0.503
POLY 3	P=0.272N	P=0.300	P=0.309	P=0.498N	P=0.467	P=0.502
POLY 1.5	P=0.274N	P=0.303	P=0.308	P=0.498N	P=0.480	P=0.500N
POLY 6	P=0.271N	P=0.298	P=0.309	P=0.497N	P=0.451	P=0.505
LOGISTIC REGRESSION	P=0.272N	P=0.305	P=0.305	(e)	P=0.466	P=0.502
COCH-ARM / FISHERS	P=0.279N	P=0.309	P=0.309	P=0.500N	P=0.500	P=0.500N
ORDER RESTRICTED	(e)	(e)	(e)	(e)	P=0.374	P=0.500N
=====						
Dose	0 PPM	312 PPM	625 PPM	1250 PPM	0 PPM	312 PPM
Males						
=====						
Females						
=====						

Statistical Analysis of Primary Tumors in Mice(B6C3F1)
Terminal Sacrifice at 105 weeks

BENZOPHENONE

Dose	Males				Females			
	0 PPM	312 PPM	625 PPM	1250 PPM	0 PPM	312 PPM	625 PPM	1250 PPM

Thyroid Gland: Follicular Cell
Carcinoma

TUMOR RATES

OVERALL (a)	0/50 (0%)	0/50 (0%)	0/50 (0%)	0/50 (0%)	0/50 (0%)	0/46.52	1/50 (2%)	2/50 (4%)	0/50 (0%)
POLY-3 RATE (b)	0/47.92	0/47.23	0/48.41	0/48.51	0/46.52	0.0%	1/47.30	2/46.69	0/43.42
POLY-3 PERCENT (g)	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	2.1%	4.3%	0.0%
TERMINAL (d)	0/44 (0%)	0/44 (0%)	0/44 (0%)	0/45 (0%)	0/40 (0%)	0/40 (0%)	0/42 (0%)	2/41 (5%)	0/31 (0%)
FIRST INCIDENCE	---	---	---	---	---	---	561	729 (T)	---

STATISTICAL TESTS

LIFE TABLE	Males				Females			
	0 PPM	312 PPM	625 PPM	1250 PPM	0 PPM	312 PPM	625 PPM	1250 PPM
POLY 3	(e)	(e)	(e)	(e)	P=0.648	P=0.500	P=0.244	(e)
POLY 1.5	(e)	(e)	(e)	(e)	P=0.644N	P=0.503	P=0.238	(e)
POLY 6	(e)	(e)	(e)	(e)	P=0.633N	P=0.502	P=0.237	(e)
LOGISTIC REGRESSION	(e)	(e)	(e)	(e)	P=0.630	P=0.505	P=0.239	(e)
COCH-ARM / FISHERS	(e)	(e)	(e)	(e)	P=0.594N	P=0.539	P=0.244	(e)
ORDER RESTRICTED	(e)	(e)	(e)	(e)	P=0.616N	P=0.500	P=0.247	(e)

Dose

0 PPM

312 PPM

Males
625 PPM

1250 PPM

0 PPM

312 PPM

Females
625 PPM

1250 PPM

Thyroid Gland: Follicular Cell
Carcinoma or Adenoma

TUMOR RATES

OVERALL (a)	1/50 (2%)	0/50 (0%)	1/50 (2%)	0/50 (0%)	0/50 (0%)	0/46.52	1/50 (2%)	2/50 (4%)	1/50 (2%)
POLY-3 RATE (b)	1/47.92	0/47.23	1/48.41	0/48.51	0/46.52	0.0%	1/47.30	2/46.69	1/44.02
POLY-3 PERCENT (g)	2.1%	0.0%	2.1%	0.0%	0.0%	0.0%	2.1%	4.3%	2.3%
TERMINAL (d)	1/44 (2%)	0/44 (0%)	1/44 (2%)	0/45 (0%)	0/40 (0%)	0/40 (0%)	0/42 (0%)	2/41 (5%)	0/31 (0%)
FIRST INCIDENCE	730 (T)	---	730 (T)	---	---	---	561	729 (T)	536

STATISTICAL TESTS

LIFE TABLE	Males				Females			
	0 PPM	312 PPM	625 PPM	1250 PPM	0 PPM	312 PPM	625 PPM	1250 PPM
POLY 3	P=0.401N	P=0.500N	P=0.762	P=0.496N	P=0.320	P=0.500	P=0.244	P=0.492
POLY 1.5	P=0.401N	P=0.503N	P=0.758N	P=0.498N	P=0.338	P=0.503	P=0.238	P=0.489
POLY 6	P=0.400N	P=0.502N	P=0.759N	P=0.498N	P=0.349	P=0.502	P=0.237	P=0.493
LOGISTIC REGRESSION	P=0.401N	P=0.504N	P=0.758N	P=0.497N	P=0.324	P=0.505	P=0.239	P=0.484
COCH-ARM / FISHERS	P=0.405N	P=0.500N	P=0.762	P=0.500N	P=0.418	P=0.539	P=0.244	P=0.615
ORDER RESTRICTED	P=0.249N	(e)	(e)	(e)	P=0.366	P=0.500	P=0.247	P=0.500

Dose	Males			Females		
	0 PPM	312 PPM	1250 PPM	0 PPM	312 PPM	1250 PPM
0 PPM						
312 PPM						
1250 PPM						

Uterus
 Polyp Stromal

TUMOR RATES	Males			Females		
	0 PPM	312 PPM	1250 PPM	0 PPM	312 PPM	1250 PPM
OVERALL (a)	4/50 (8%)	1/50 (2%)	0/50 (0%)	0/50 (0%)	0/50 (0%)	0/50 (0%)
POLY-3 RATE (b)	4/46.52	1/46.76	0/46.69	0/43.42	0/43.42	0/43.42
POLY-3 PERCENT (g)	8.6%	2.1%	0.0%	0.0%	0.0%	0.0%
TERMINAL (d)	4/40 (10%)	1/42 (2%)	0/41 (0%)	0/31 (0%)	0/31 (0%)	0/31 (0%)
FIRST INCIDENCE	729 (T)	729 (T)	---	---	---	---
STATISTICAL TESTS						
LIFE TABLE						
POLY 3	P=0.025N*	P=0.165N	P=0.060N	P=0.099N	P=0.070N	P=0.066N
POLY 1.5	P=0.019N*	P=0.177N	P=0.060N	P=0.074N	P=0.059N	P=0.059N
POLY 6	P=0.018N*	P=0.179N	P=0.061N	P=0.074N	P=0.059N	P=0.059N
LOGISTIC REGRESSION	P=0.019N*	P=0.176N	P=0.059N	P=0.074N	P=0.059N	P=0.059N
COCH-ARM / FISHERS	P=0.025N*	P=0.165N	P=0.060N	P=0.074N	P=0.059N	P=0.059N
ORDER RESTRICTED	P=0.019N*	P=0.181N	P=0.059N	P=0.059N	P=0.059N	P=0.059N
	P=0.008N**	(e)	(e)	(e)	(e)	(e)

Uterus
 Sarcoma Stromal or Polyp Stromal

TUMOR RATES	Males			Females		
	0 PPM	312 PPM	1250 PPM	0 PPM	312 PPM	1250 PPM
OVERALL (a)	5/50 (10%)	1/50 (2%)	0/50 (0%)	0/50 (0%)	0/50 (0%)	0/50 (0%)
POLY-3 RATE (b)	5/46.60	1/46.76	0/46.69	0/43.42	0/43.42	0/43.42
POLY-3 PERCENT (g)	10.7%	2.1%	0.0%	0.0%	0.0%	0.0%
TERMINAL (d)	4/40 (10%)	1/42 (2%)	0/41 (0%)	0/31 (0%)	0/31 (0%)	0/31 (0%)
FIRST INCIDENCE	709	729 (T)	---	---	---	---
STATISTICAL TESTS						
LIFE TABLE						
POLY 3	P=0.012N*	P=0.096N	P=0.033N*	P=0.060N	P=0.037N*	P=0.037N*
POLY 1.5	P=0.008N**	P=0.101N	P=0.030N*	P=0.037N*	P=0.034N*	P=0.034N*
POLY 6	P=0.008N**	P=0.102N	P=0.031N*	P=0.034N*	P=0.040N*	P=0.040N*
LOGISTIC REGRESSION	P=0.008N**	P=0.100N	P=0.030N*	P=0.032N*	P=0.046N*	P=0.046N*
COCH-ARM / FISHERS	P=0.010N*	P=0.100N	P=0.032N*	P=0.046N*	P=0.046N*	P=0.046N*
ORDER RESTRICTED	P=0.009N**	P=0.102N	P=0.028N*	P=0.028N*	P=0.028N*	P=0.028N*
	P=0.002N**	(e)	(e)	(e)	(e)	(e)

Dose	Males				Females			
	0 PPM	312 PPM	625 PPM	1250 PPM	0 PPM	312 PPM	625 PPM	1250 PPM
All Organs								
Hemangioma								
TUMOR RATES								
OVERALL (a)	#	#	#	#	#	#	#	#
POLY-3 RATE (b)	0/50 (0%)	0/50 (0%)	0/50 (0%)	0/50 (0%)	0/50 (0%)	2/50 (4%)	0/50 (0%)	0/50 (0%)
POLY-3 PERCENT (g)	0/47.92	0/47.23	0/48.41	0/48.51	0/46.52	2/46.76	0/46.69	0/43.42
TERMINAL (d)	0.0%	0.0%	0.0%	0.0%	0.0%	4.3%	0.0%	0.0%
FIRST INCIDENCE	0/44 (0%)	0/44 (0%)	0/44 (0%)	0/45 (0%)	0/40 (0%)	2/42 (5%)	0/41 (0%)	0/31 (0%)
STATISTICAL TESTS								
LIFE TABLE								
POLY 3	(e)	(e)	(e)	(e)	P=0.455N	P=0.249	(e)	(e)
POLY 1.5	(e)	(e)	(e)	(e)	P=0.413N	P=0.238	(e)	(e)
LOGISTIC REGRESSION	(e)	(e)	(e)	(e)	P=0.410N	P=0.238	(e)	(e)
COCH-ARM / FISHERS	(e)	(e)	(e)	(e)	P=0.417N	P=0.239	(e)	(e)
ORDER RESTRICTED	(e)	(e)	(e)	(e)	P=0.405N	P=0.249	(e)	(e)
Dose								
0 PPM	312 PPM	625 PPM	1250 PPM	0 PPM	312 PPM	625 PPM	1250 PPM	
All Organs								
Hemangiosarcoma								
TUMOR RATES								
OVERALL (a)	#	#	#	#	#	#	#	#
POLY-3 RATE (b)	3/50 (6%)	2/50 (4%)	1/50 (2%)	0/50 (0%)	1/50 (2%)	0/50 (0%)	2/50 (4%)	2/50 (4%)
POLY-3 PERCENT (g)	3/48.40	2/47.62	1/48.41	0/48.51	1/46.60	0/46.76	2/46.80	2/44.04
TERMINAL (d)	6.2%	4.2%	2.1%	0.0%	2.2%	0.0%	4.3%	4.5%
FIRST INCIDENCE	1/44 (2%)	1/44 (2%)	1/44 (2%)	0/45 (0%)	0/40 (0%)	0/42 (0%)	1/41 (2%)	0/31 (0%)
STATISTICAL TESTS								
LIFE TABLE								
POLY 3	P=0.062N	P=0.513N	P=0.308N	P=0.123N	P=0.199	P=0.505N	P=0.497	P=0.449
POLY 1.5	P=0.061N	P=0.507N	P=0.306N	P=0.119N	P=0.227	P=0.499N	P=0.501	P=0.480
LOGISTIC REGRESSION	P=0.061N	P=0.504N	P=0.305N	P=0.119N	P=0.234	P=0.500N	P=0.500	P=0.487
COCH-ARM / FISHERS	P=0.061N	P=0.511N	P=0.308N	P=0.119N	P=0.219	P=0.499N	P=0.504	P=0.472
ORDER RESTRICTED	P=0.073N	P=0.477N	P=0.332N	P=0.139N	P=0.260	P=0.500N	P=0.500	P=0.537
	P=0.062N	P=0.500N	P=0.309N	P=0.121N	P=0.245	P=0.500N	P=0.500	P=0.500
	P=0.057N	(e)	(e)	(e)	P=0.250	(e)	(e)	(e)

Dose	Males			Females		
	0 PPM	312 PPM	1250 PPM	0 PPM	312 PPM	1250 PPM

All Organs
 Hemangiosarcoma or Hemangioma

TUMOR RATES	Males		Females	
	#	#	#	#
OVERALL (a)	3/50 (6%)	2/50 (4%)	1/50 (2%)	2/50 (4%)
POLY-3 RATE (b)	3/48.40	2/47.62	1/46.60	2/44.04
POLY-3 PERCENT (g)	6.2%	4.2%	2.2%	4.5%
TERMINAL (d)	1/44 (2%)	1/44 (2%)	0/40 (0%)	0/31 (0%)
FIRST INCIDENCE	652	620	708	606
			729 (T)	
			700	

STATISTICAL TESTS

LIFE TABLE	Males		Females	
	P=0.062N	P=0.513N	P=0.123N	P=0.497
POLY 3	P=0.061N	P=0.507N	P=0.119N	P=0.480
POLY 1.5	P=0.061N	P=0.504N	P=0.119N	P=0.487
	P=0.061N	P=0.511N	P=0.119N	P=0.504
	P=0.073N	P=0.477N	P=0.139N	P=0.537
	P=0.062N	P=0.500N	P=0.121N	P=0.500
		(e)	(e)	(e)

Dose	Males			Females		
	0 PPM	312 PPM	1250 PPM	0 PPM	312 PPM	1250 PPM

All Organs
 Histiocytic Sarcoma

TUMOR RATES	Males		Females	
	#	#	#	#
OVERALL (a)	1/50 (2%)	0/50 (0%)	0/50 (0%)	5/50 (10%)
POLY-3 RATE (b)	1/47.92	0/47.23	0/48.51	5/46.73
POLY-3 PERCENT (g)	2.1%	0.0%	0.0%	10.7%
TERMINAL (d)	1/44 (2%)	0/44 (0%)	0/45 (0%)	4/41 (10%)
FIRST INCIDENCE	730 (T)			718

STATISTICAL TESTS

LIFE TABLE	Males		Females	
	P=0.304N	P=0.500N	P=0.496N	P=0.037 *
POLY 3	P=0.305N	P=0.503N	P=0.498N	P=0.031 *
POLY 1.5	P=0.306N	P=0.502N	P=0.498N	P=0.031 *
	P=0.305N	P=0.504N	P=0.497N	P=0.103
	P=0.304N	(e)	(e)	P=0.034 *
	P=0.306N	P=0.500N	P=0.500N	P=0.028 *
		(e)	(e)	(e)

All Organs
 Malignant Lymphoma: Histiocytic, Lymphocytic, Mixed,
 NOS, or Undifferentiated Cell Type

TUMOR RATES	Males				Females				
	Dose	0 PPM	312 PPM	1250 PPM	0 PPM	312 PPM	625 PPM	1250 PPM	
OVERALL (a)		2/50 (4%)	0/50 (0%)	2/50 (4%)	3/50 (6%)	8/50 (16%)	9/50 (18%)	5/50 (10%)	10/50 (20%)
POLY-3 RATE (b)		2/48.07	0/47.23	2/48.41	3/48.63	8/47.74	9/47.68	5/46.99	10/45.12
POLY-3 PERCENT (g)		4.2%	0.0%	4.1%	6.2%	16.8%	18.9%	10.6%	22.2%
TERMINAL (d)		1/44 (2%)	0/44 (0%)	2/44 (5%)	2/45 (4%)	5/40 (13%)	6/42 (14%)	4/41 (10%)	5/31 (16%)
FIRST INCIDENCE		690	---	730 (T)	700	414	522	645	435
STATISTICAL TESTS									
LIFE TABLE		P=0.248	P=0.242N	P=0.691	P=0.510	P=0.241	P=0.531	P=0.269N	P=0.260
POLY 3		P=0.245	P=0.241N	P=0.691N	P=0.505	P=0.352	P=0.499	P=0.286N	P=0.347
POLY 1.5		P=0.242	P=0.240N	P=0.691N	P=0.504	P=0.367	P=0.497	P=0.286N	P=0.364
POLY 6		P=0.247	P=0.243N	P=0.692N	P=0.506	P=0.335	P=0.504	P=0.285N	P=0.328
LOGISTIC REGRESSION		P=0.239	P=0.236N	P=0.694N	P=0.495	P=0.438	P=0.501	P=0.268N	P=0.460
COCH-ARM / FISHERS		P=0.237	P=0.247N	P=0.691N	P=0.500	P=0.397	P=0.500	P=0.277N	P=0.398
ORDER RESTRICTED		P=0.224	(e)	(e)	(e)	P=0.311	(e)	(e)	(e)
Dose									
	0 PPM	312 PPM	Males 625 PPM	1250 PPM	0 PPM	312 PPM	Females 625 PPM	1250 PPM	

All Organs
 Benign Tumors

TUMOR RATES	Males				Females				
	Dose	0 PPM	312 PPM	1250 PPM	0 PPM	312 PPM	625 PPM	1250 PPM	
OVERALL (a)		27/50 (54%)	23/50 (46%)	30/50 (60%)	27/50 (54%)	15/50 (30%)	17/50 (34%)	19/50 (38%)	19/50 (38%)
POLY-3 RATE (b)		27/48.47	23/48.05	30/49.12	27/49.32	15/46.60	17/47.86	19/46.78	19/46.69
POLY-3 PERCENT (g)		55.7%	47.9%	61.1%	54.8%	32.2%	35.5%	40.6%	40.7%
TERMINAL (d)		24/44 (55%)	21/44 (48%)	27/44 (61%)	25/45 (56%)	14/40 (35%)	15/42 (36%)	18/41 (44%)	10/31 (32%)
FIRST INCIDENCE		652	606	585	568	708	316	704	344
STATISTICAL TESTS									
LIFE TABLE		P=0.450	P=0.288N	P=0.353	P=0.531N	P=0.050	P=0.475	P=0.285	P=0.097
POLY 3		P=0.446	P=0.285N	P=0.370	P=0.543N	P=0.214	P=0.451	P=0.264	P=0.261
POLY 1.5		P=0.429	P=0.281N	P=0.363	P=0.554N	P=0.218	P=0.439	P=0.259	P=0.262
POLY 6		P=0.456	P=0.292N	P=0.370	P=0.537N	P=0.207	P=0.462	P=0.270	P=0.257
LOGISTIC REGRESSION		P=0.430	P=0.296N	P=0.365	P=0.558N	P=0.204	P=0.417	P=0.267	P=0.264
COCH-ARM / FISHERS		P=0.396	P=0.274N	P=0.343	P=0.579N	P=0.226	P=0.415	P=0.263	P=0.263
ORDER RESTRICTED		P=0.429	(e)	(e)	(e)	P=0.314	(e)	(e)	(e)

Dose	Males			Females		
	0 PPM	312 PPM	1250 PPM	0 PPM	312 PPM	1250 PPM

All Organs
 Malignant Tumors

TUMOR RATES	#	#	#	#	#	#
OVERALL (a)	17/50 (34%)	10/50 (20%)	11/50 (22%)	13/50 (26%)	16/50 (32%)	21/50 (42%)
POLY-3 RATE (b)	17/50.00	10/49.09	11/48.78	13/49.47	16/48.40	21/46.29
POLY-3 PERCENT (g)	34.0%	20.4%	22.6%	26.3%	33.1%	45.4%
TERMINAL (d)	11/44 (25%)	6/44 (14%)	9/44 (21%)	9/45 (20%)	9/40 (23%)	13/41 (32%)
FIRST INCIDENCE	463	449	679	606	414	435

STATISTICAL TESTS

LIFE TABLE	P=0.310N	P=0.113N	P=0.152N	P=0.258N	P=0.029 *	P=0.313N	P=0.375	P=0.091
POLY 3	P=0.326N	P=0.097N	P=0.150N	P=0.269N	P=0.064	P=0.326N	P=0.352	P=0.154
POLY 1.5	P=0.324N	P=0.093N	P=0.142N	P=0.264N	P=0.072	P=0.331N	P=0.348	P=0.169
POLY 6	P=0.328N	P=0.102N	P=0.160N	P=0.274N	P=0.057	P=0.319N	P=0.354	P=0.143
LOGISTIC REGRESSION	P=0.393N	P=0.045N*	P=0.147N	P=0.278N	P=0.125	P=0.330N	P=0.336	P=0.226
COCH-ARM / FISHERS	P=0.321N	P=0.088N	P=0.133N	P=0.257N	P=0.091	P=0.330N	P=0.338	P=0.204
ORDER RESTRICTED	P=0.164N	(e)	(e)	(e)	P=0.090	(e)	(e)	(e)

Dose	Males			Females		
	0 PPM	312 PPM	1250 PPM	0 PPM	312 PPM	1250 PPM

All Organs
 Malignant and Benign Tumors

TUMOR RATES	#	#	#	#	#	#		
OVERALL (a)	38/50 (76%)	30/50 (60%)	34/50 (68%)	35/50 (70%)	25/50 (50%)	28/50 (56%)	32/50 (64%)	30/50 (60%)
POLY-3 RATE (b)	38/50.00	30/49.52	34/49.30	35/50.00	25/48.40	28/49.46	32/48.95	30/48.01
POLY-3 PERCENT (g)	76.0%	60.6%	69.0%	70.0%	51.7%	56.6%	65.4%	62.5%
TERMINAL (d)	32/44 (73%)	25/44 (57%)	30/44 (68%)	30/45 (67%)	18/40 (45%)	22/42 (52%)	26/41 (63%)	16/31 (52%)
FIRST INCIDENCE	463	449	585	568	414	316	204	344

STATISTICAL TESTS

LIFE TABLE	P=0.413N	P=0.109N	P=0.285N	P=0.305N	P=0.027 *	P=0.433	P=0.173	P=0.063
POLY 3	P=0.463N	P=0.074N	P=0.288N	P=0.327N	P=0.145	P=0.387	P=0.119	P=0.191
POLY 1.5	P=0.466N	P=0.070N	P=0.272N	P=0.327N	P=0.153	P=0.371	P=0.117	P=0.196
POLY 6	P=0.460N	P=0.079N	P=0.311N	P=0.327N	P=0.141	P=0.402	P=0.119	P=0.191
LOGISTIC REGRESSION	P=0.499N	P=0.056N	P=0.260N	(e)	P=0.210	P=0.340	P=0.113	P=0.237
COCH-ARM / FISHERS	P=0.470N	P=0.066N	P=0.252N	P=0.326N	P=0.173	P=0.344	P=0.113	P=0.211
ORDER RESTRICTED	P=0.241N	(e)	(e)	(e)	P=0.170	(e)	(e)	(e)

(a) Number of tumor-bearing animals / number of animals examined at site.
 (b) Number of tumor-bearing animals / Poly-3 number
 (d) Observed incidence at terminal kill.

(f) Beneath the control incidence are the P-values associated with the trend test. Beneath the dosed group incidence are the P-values corresponding to pairwise comparisons between the controls and that dosed group. The life table analysis regards tumors in animals dying prior to terminal kill as being (directly or indirectly) the cause of death.

Logistic regression is an alternative

method for analyzing the incidence of non-fatal tumors. The Cochran-Armitage and Fishers exact tests compare directly the overall incidence rates

For all tests a negative trend is indicated by N

(e) Value of Statistic cannot be computed.

(g) Poly-3 adjusted lifetime tumor incidence.

(I) Interim sacrifice

(T) Terminal sacrifice

Tumor rates based on number of animals necropsied.

* To the right of any statistical result, indicates significance at $(P \leq 0.05)$.

** To the right of any statistical result, indicates significance at $(P \leq 0.01)$.

NTP Experiment-Test: 89138-04
Study Type: CHRONIC
Route: DOSED FEED

INCIDENCE RATES OF NONNEOPLASTIC LESIONS BY ANATOMIC SITE (a)
WITH AVERAGE SEVERITY GRADES [b]
BENZOPHENONE

Report: PEIRPT18
Date: 06/24/03
Time: 09:03:04

FINAL#1/MICE

Facility: Battelle Columbus Laboratory

Chemical CAS #: 119-61-9

Lock Date: 04/26/02

Cage Range: All

Reasons For Removal: All

Removal Date Range: All

Treatment Groups: Include All

- a Number of animals examined microscopically at site and number of animals with lesion
- b Average severity grade (1-minimal;2-mild;3-moderate;4-marked)

NTP Experiment-Test: 88138-04
 Study Type: CHRONIC
 Route: DOSED FEED

INCIDENCE RATES OF NONNEOPLASTIC LESIONS BY ANATOMIC SITE (a)
 WITH AVERAGE SEVERITY GRADES^(b)
 BENZOPHENONE

Report: PEIRPT18
 Date: 06/24/03
 Time: 09:03:04

B6C3F1 MICE FEMALE 0 PPM 312 PPM 625 PPM 1250 PPM

DISPOSITION SUMMARY

Animals Initially In Study	50	50	50	50
Early Deaths				
Moribund Sacrifice	4	2	5	6
Natural Death	6	6	4	12
Accidentally Killed				1
Survivors	40	42	41	31
Terminal Sacrifice				
Animals Examined Microscopically	50	50	50	50

ALIMENTARY SYSTEM

Gallbladder	(49)	(50)	(50)	(50)
Cyst		1 [2.0]		
Infiltration Cellular, Lymphoid			1 [2.0]	
Inflammation, Chronic Active	1 [2.0]		1 [2.0]	1 [1.0]
Mineralization			1 [1.0]	
Intestine Large, Colon	(50)	(50)	(50)	(50)
Inflammation, Chronic Active	(50)	(50)	(50)	(50)
Intestine Small, Duodenum	(50)	(50)	(50)	(50)
Inflammation, Chronic Active	(50)	(50)	1 [3.0]	(50)
Intestine Small, Jejunum	(50)	(50)	3 [3.0]	(50)
Peyer's Patch, Hyperplasia, Lymphoid	(50)	(50)	(50)	1 [4.0]
Intestine Small, Ileum	(50)	(50)	1 [4.0]	(50)
Peyer's Patch, Hyperplasia, Lymphoid	(50)	(50)	(50)	(50)
Liver				
Angiectasis	2 [2.5]		1 [2.0]	4 [2.3]
Basophilic Focus	3		1	2
Clear Cell Focus	3		4	4
Eosinophilic Focus	2	2	7	7
Hematopoietic Cell Proliferation	18 [1.3]	11 [1.1]	20 [1.3]	19 [1.1]
Infarct				1 [4.0]
Infiltration Cellular, Lymphoid	36 [1.2]	38 [1.2]	35 [1.2]	35 [1.2]
Inflammation, Chronic Active	44 [1.1]	40 [1.1]	41 [1.0]	36 [1.1]
Mineralization			1 [2.0]	
Mixed Cell Focus	2	5 [1.5]	3 [1.7]	2
Tension Lipidosis	4 [1.3]		3 [1.7]	7 [1.1]
Bile Duct, Hyperplasia	1 [1.0]			1
Hepatocyte, Autolysis				
Hepatocyte, Mitotic Alteration				
Hepatocyte, Multinucleated			1 [2.0]	2 [1.0]

a Number of animals examined microscopically at site and number of animals with lesion
 b Average severity grade (1-minimal;2-mild;3-moderate;4-marked)

NTP Experiment-Test: 88138-04
 Study Type: CHRONIC
 Route: DOSED FREED

INCIDENCE RATES OF NONNEOPLASTIC LESIONS BY ANATOMIC SITE (a)
 WITH AVERAGE SEVERITY GRADES [b]
 BENZOPHENONE

Report: PEIRPT18
 Date: 06/24/03
 Time: 09:03:04

	0 PPM	312 PPM	625 PPM	1250 PPM
ALIMENTARY SYSTEM - CONT				
Hepatocyte, Necrosis	3 [2.0]	5 [2.0]	4 [1.5]	34 [1.2]
Hepatocyte, Vacuolization Cytoplasmic	41 [1.1]	43 [1.0]	39 [1.0]	1 [4.0]
Hepatocyte, Centrilobular, Degeneration		29 [2.0]	44 [2.0]	37 [2.9]
Hepatocyte, Centrilobular, Hypertrophy	(6)	(9)	(11)	(9)
Mesentery	1 [2.0]	2 [2.0]	8 [2.0]	4 [2.0]
Fat, Fibrosis				1 [4.0]
Fat, Hemorrhage				
Fat, Infiltration Cellular, Lymphoid	1 [4.0]	3 [2.0]	4 [2.3]	3 [1.7]
Fat, Inflammation, Chronic Active		1 [2.0]	7 [2.0]	1 [1.0]
Fat, Mineralization		4 [4.0]	2 [1.5]	4 [4.0]
Fat, Necrosis	1 [4.0]	4 [4.0]	9 [4.0]	4 [4.0]
Pancreas	(50)	(50)	(50)	(50)
Cyst	1 [3.0]	2 [3.5]	33 [1.2]	18 [1.3]
Infiltration Cellular, Lymphoid	20 [1.1]	24 [1.0]	1 [4.0]	2 [4.0]
Acinus, Atrophy	1 [4.0]	1 [1.0]		
Acinus, Cytoplasmic Alteration		1 [1.0]		
Duct, Inflammation, Chronic Active				
Duct, Pigmentation				
Salivary Glands	(50)	(50)	1 [3.0]	(50)
Infiltration Cellular, Lymphoid	27 [1.1]	34 [1.2]	30 [1.3]	28 [1.1]
Stomach, Fore stomach	(50)	(50)	(50)	(50)
Inflammation, Chronic Active	1 [3.0]	1 [2.0]	1 [2.0]	1 [2.0]
Epithelium, Hyperkeratosis	1 [2.0]	1 [3.0]	1 [2.0]	1 [1.0]
Epithelium, Hyperplasia, Squamous	1 [2.0]	1 [3.0]	1 [2.0]	1 [2.0]
Epithelium, Ulcer	1 [4.0]			1 [2.0]
Stomach, Glandular	(50)	(50)	(50)	(50)
Epithelium, Glands, Hyperplasia	1 [2.0]	16 [1.2]	22 [1.2]	10 [1.3]
Glands, Ectasia	18 [1.0]	3 [1.0]		2 [1.0]
Glands, Mineralization	(21)	(29)	(24)	(20)
Tooth			1	
Malformation				
Gingiva, Inflammation, Chronic Active	21 [1.6]	29 [1.8]	24 [1.7]	20 [1.6]
CARDIOVASCULAR SYSTEM				
Blood Vessel	(50)	(50)	(50)	(50)
Aorta, Mineralization	(50)	(50)	(50)	1 [2.0]
Heart				(50)
Cardiomyopathy				1 [2.0]
Hyperplasia, Atypical				1 [2.0]
Inflammation, Chronic Active	2 [1.5]	1 [1.0]	1 [2.0]	1 [4.0]
Mineralization			1 [2.0]	

a Number of animals examined microscopically at site and number of animals with lesion
 b Average severity grade (1-minimal;2-mild;3-moderate;4-marked)

NTP Experiment-Test: 88138-04
 Study Type: CHRONIC
 Route: DOSED FEED

INCIDENCE RATES OF NONNEOPLASTIC LESIONS BY ANATOMIC SITE (a)
 WITH AVERAGE SEVERITY GRADES (b)
 BENZOPHENONE

Report: PEIRPT18
 Date: 06/24/03
 Time: 09:03:04

B6C3F1 MICE FEMALE

0 PPM 312 PPM 625 PPM 1250 PPM

CARDIOVASCULAR SYSTEM - CONT
 Necrosis
 Valve, Inflammation, Chronic Active

1 [3.0]
 1 [4.0]

ENDOCRINE SYSTEM

Adrenal Cortex	(50)	(50)	(50)	(49)
Accessory Adrenal Cortical Nodule	1 [2.0]			1 [1.0]
Hematopoietic Cell Proliferation	1 [2.0]			1 [2.0]
Hemorrhage				1 [4.0]
Hyperplasia	2 [1.0]			
Hypertrophy	1 [1.0]	1 [2.0]		
Inflammation, Chronic Active	1 [2.0]			
Mineralization				1 [2.0]
Necrosis		1 [2.0]		1 [1.0]
Subcapsular, Hyperplasia	49 [1.8]	49 [1.9]	49 [1.8]	49 [1.8]
Adrenal Medulla	(50)	(50)	(50)	49 [1.8]
Hyperplasia				(49)
Islets, Pancreatic	(50)	(50)	(50)	(50)
Hyperplasia	3 [2.0]	1 [2.0]		
Parathyroid Gland	(42)	(41)		
Cyst				(40)
Pituitary Gland	(50)	(50)	3 [2.0]	1 [2.0]
Pars Distalis, Angiectasis	2 [2.5]	4 [1.5]	5 [1.8]	3 [2.7]
Pars Distalis, Cyst	5 [1.0]	3 [2.0]	2 [1.0]	3 [2.7]
Pars Distalis, Hyperplasia	14 [1.9]	14 [2.1]	13 [2.2]	3 [2.7]
Pars Distalis, Hypertrophy			1 [1.0]	
Pars Distalis, Pigmentation			1 [1.0]	
Thyroid Gland	(50)	(50)	(50)	(50)
Infiltration Cellular, Lymphoid		1 [1.0]	2 [1.0]	2 [1.5]
Inflammation, Chronic Active		1 [2.0]	2 [1.5]	
C-Cell, Hyperplasia				1 [1.0]
Follicle, Cyst		1 [2.0]		
Follicle, Degeneration	17 [1.1]	19 [1.4]	12 [1.3]	9 [1.4]

GENERAL BODY SYSTEM

None

GENITAL SYSTEM

a Number of animals examined microscopically at site and number of animals with lesion
 b Average severity grade (1-minimal;2-mild;3-moderate;4-marked)

NTP Experiment-Test: 88138-04
 Study Type: CHRONIC
 Route: DOSED FEED

INCIDENCE RATES OF NONNEOPLASTIC LESIONS BY ANATOMIC SITE (a)
 WITH AVERAGE SEVERITY GRADES [b]
 BENZOPHENONE

Report: PEIRPT18
 Date: 06/24/03
 Time: 09:03:04

B6C3F1 MICE FEMALE

0 PPM 312 PPM 625 PPM 1250 PPM

GENITAL SYSTEM - CONT	0 PPM	312 PPM	625 PPM	1250 PPM
Clitroral Gland	(50)	(49)	(50)	(50)
Inflammation, Chronic Active	8 [2.1]	1 [1.0]		2 [1.5]
Duct, Cyst	1 [2.0]			
Ovary	(49)	(50)	(50)	(50)
Angiectasis	1 [2.0]	1 [2.0]	46 [3.8]	45 [4.0]
Atrophy	48 [3.9]	48 [3.7]	17 [2.9]	14 [2.7]
Cyst	22 [2.6]	17 [2.6]	3 [4.0]	4 [4.0]
Hemorrhage	2 [4.0]	5 [4.0]		1 [4.0]
Infiltration Cellular, Lymphoid			1 [4.0]	
Inflammation, Chronic Active	2 [3.5]	1 [2.0]	2 [2.0]	
Mineralization		4 [1.8]	2 [2.0]	
Pigmentation	6 [1.2]	2 [1.0]	3 [1.7]	1 [1.0]
Uterus	(49)	(50)	(50)	(50)
Angiectasis	1 [2.0]	4 [2.0]	1 [3.0]	
Inflammation, Chronic Active	5 [2.2]	4 [2.0]	2 [3.5]	2 [2.0]
Endometrium, Hyperplasia, Cystic	47 [2.2]	45 [2.4]	44 [2.3]	43 [2.1]

HEMATOPOIETIC SYSTEM

Bone Marrow	(50)	(50)	(50)	(50)
Myelofibrosis	18 [1.6]	30 [1.5]	20 [1.5]	26 [1.6]
Myeloid Cell, Hyperplasia	1 [4.0]			
Lymph Node	(8)	(12)	(11)	(15)
Lumbar, Hyperplasia, Lymphoid	1 [3.0]	1 [3.0]		2 [3.0]
Mediastinal, Atrophy	1 [3.0]			
Mediastinal, Hyperplasia, Lymphoid	2 [2.5]	5 [2.8]	4 [3.5]	4 [2.0]
Mediastinal, Infiltration Cellular, Histocyte				
Mediastinal, Inflammation, Chronic Active	1 [3.0]		4 [3.0]	1 [4.0]
Pancreatic, Hyperplasia, Lymphoid	1 [3.0]		1 [2.0]	
Pancreatic, Pigmentation				
Renal, Hemorrhage		1 [4.0]		1 [3.0]
Renal, Hyperplasia, Lymphoid		3 [4.0]		1 [4.0]
Lymph Node, Mandibular	(50)	(50)	(50)	(49)
Hyperplasia, Lymphoid	4 [2.3]	20 [2.9]	12 [2.8]	9 [2.7]
Lymph Node, Mesenteric	(50)	(49)	(49)	(50)
Hyperplasia, Lymphoid	6 [3.3]	12 [3.3]	6 [3.2]	4 [2.5]
Spleen	(50)	(50)	(50)	(50)
Hematopoietic Cell Proliferation	16 [2.6]	35 [2.1]	32 [2.4]	27 [2.8]
Hemorrhage				2 [4.0]
Inflammation, Chronic Active				1 [2.0]
Necrosis				1 [4.0]

a Number of animals examined microscopically at site and number of animals with lesion
 b Average severity grade (1-minimal;2-mild;3-moderate;4-marked)

NTP Experiment-Test: 88138-04
 Study Type: CHRONIC
 Route: DOSED FEED

INCIDENCE RATES OF NONNEOPLASTIC LESIONS BY ANATOMIC SITE (a)
 WITH AVERAGE SEVERITY GRADES (b)
 BENZOPHENONE

Report: PEIRPT18
 Date: 06/24/03
 Time: 09:03:04

B6C3F1 MICE FEMALE

0 PPM 312 PPM 625 PPM 1250 PPM

HEMATOPOIETIC SYSTEM - CONT				
Lymphoid Follicle, Hyperplasia, Lymphoid	24 [2.5]	36 [2.5]	37 [2.7]	22 [2.9]
Thymus	(46)	(50)	(50)	(50)
Atrophy	8 [3.5]	7 [3.1]	3 [4.0]	13 [3.2]
Cyst	23	35	31	24
Ectopic Parathyroid Gland	1 [2.0]	3 [1.3]	1 [2.0]	1 [1.0]
Hyperplasia, Lymphoid	1 [2.0]	8 [3.0]	5 [3.0]	2 [2.0]
Infiltration Cellular, Mast Cell				
Inflammation, Chronic Active	1 [3.0]			
Thymocyte, Necrosis		1 [3.0]		

INTEGUMENTARY SYSTEM

Skin	(50)	(50)	(50)	(50)
Subcutaneous Tissue, Fibrosis		1 [3.0]		
Subcutaneous Tissue, Infiltration Cellular, Lymphoid		4 [1.0]	1 [2.0]	
Subcutaneous Tissue, Infiltration Cellular, Polymorphonuclear	1 [3.0]			

MUSCULOSKELETAL SYSTEM

Bone	(50)	(50)	(50)	(50)
Maxilla, Fracture		(4)	(2)	1
Skeletal Muscle	(2)	3 [1.0]	2 [2.0]	(4)
Infiltration Cellular, Lymphoid				

NERVOUS SYSTEM

Brain	(50)	(50)	(50)	(50)
Hemorrhage		1 [2.0]		2 [2.0]
Infiltration Cellular, Lymphoid			2 [2.0]	
Inflammation, Chronic Active				1 [2.0]

RESPIRATORY SYSTEM

Lung	(50)	(50)	(50)	(50)
Foreign Body	1			
Infiltration Cellular, Lymphoid	33 [1.3]	44 [1.5]	44 [1.6]	35 [1.4]
Inflammation, Chronic Active		1 [1.0]	1 [2.0]	

a Number of animals examined microscopically at site and number of animals with lesion
 b Average severity grade (1-minimal;2-mild;3-moderate;4-marked)

NTP Experiment-Test: 88138-04
 Study Type: CHRONIC
 Route: DOSED FEED

INCIDENCE RATES OF NONNEOPLASTIC LESIONS BY ANATOMIC SITE (a)
 WITH AVERAGE SEVERITY GRADES [b]
 BENZOPHENONE

Report: PEIRPT18
 Date: 06/24/03
 Time: 09:03:04

B6C3F1 MICE FEMALE

0 PPM 312 PPM 625 PPM 1250 PPM

RESPIRATORY SYSTEM - CONT

Metaplasia, Osseous				1 [1.0]
Pigmentation				2 [2.5]
Alveolar Epithelium, Hyperplasia	1 [2.0]	1 [2.0]	2 [3.0]	2 [1.0]
Alveolus, Hemorrhage	2 [2.0]			3 [1.7]
Alveolus, Infiltration Cellular, Histocyte	1 [4.0]			2 [2.5]
Mediastinum, Inflammation, Chronic Active	1 [3.0]			(50)
Nose	(50)	(50)	(50)	(50)
Hemorrhage				1 [3.0]
Inflammation, Chronic Active	1 [1.0]		1 [2.0]	1 [2.0]
Nasolacrimal Duct, Inflammation, Chronic Active	1 [2.0]			
Olfactory Epithelium, Glands, Metaplasia	(50)	(50)	(50)	39 [1.7]
Trachea				(50)
Glands, Cyst		1 [2.0]		
Glands, Inflammation, Chronic Active		1 [2.0]		

SPECIAL SENSES SYSTEM

Eye	(50)	(50)	(50)	(50)
Atrophy	2 [4.0]			
Lens, Cataract	(50)	(50)	1 [3.0]	(49)
Harderian Gland			3 [2.7]	1 [2.0]
Hyperplasia		3 [2.7]	3 [2.0]	1 [2.0]
Infiltration Cellular, Lymphoid	29 [1.0]	27 [1.0]	27 [1.0]	23 [1.0]

URINARY SYSTEM

Kidney	(50)	(50)	(50)	(50)
Accumulation, Hyaline Droplet			1 [3.0]	1 [4.0]
Atrophy	1 [3.0]			
Glomerulosclerosis				1 [4.0]
Hydronephrosis	2 [2.5]			1 [3.0]
Infarct	4 [2.8]	1 [1.0]		3 [2.7]
Infiltration Cellular, Lymphoid	41 [1.1]	45 [1.2]	43 [1.3]	39 [1.3]
Inflammation, Chronic Active	1 [3.0]			
Metaplasia, Osseous	1 [3.0]	2 [1.5]	4 [1.0]	2 [1.5]
Mineralization	15 [1.0]	31 [1.0]	36 [1.1]	49 [1.5]
Nephropathy	21 [1.2]	33 [1.1]	31 [1.5]	30 [1.7]
Artery, Inflammation, Chronic Active	1 [2.0]			1 [3.0]
Cortex, Cyst		1		
Renal Tubule, Pigmentation	1 [3.0]	1 [3.0]	1 [2.0]	

a Number of animals examined microscopically at site and number of animals with lesion
 b Average severity grade (1-minimal;2-mild;3-moderate;4-marked)

NTP Experiment-Test: 88138-04
Study Type: CHRONIC
Route: DOSED FEED

INCIDENCE RATES OF NONNEOPLASTIC LESIONS BY ANATOMIC SITE (a)
WITH AVERAGE SEVERITY GRADES (b)
BENZOPHENONE

Report: PEIRPT18
Date: 06/24/03
Time: 09:03:04

B6C3F1 MICE FEMALE 0 PPM 312 PPM 625 PPM 1250 PPM

URINARY SYSTEM - CONT	(50)	(49)	(50)	(50)
Urinary Bladder	37 [1.2]	38 [1.2]	40 [1.2]	39 [1.0]
Infiltration Cellular, Lymphoid				1 [3.0]
Inflammation, Chronic Active				

a Number of animals examined microscopically at site and number of animals with lesion
b Average severity grade (1-minimal;2-mild;3-moderate;4-marked)

NTP Experiment-Test: 88138-04
 Study Type: CHRONIC
 Route: DOSED FEED

INCIDENCE RATES OF NONNEOPLASTIC LESIONS BY ANATOMIC SITE (a)
 WITH AVERAGE SEVERITY GRADES [b]
 BENZOPHENONE

Report: PETRPT18
 Date: 06/24/03
 Time: 09:03:04

B6C3F1 MICE MALE

0 PPM 312 PPM 625 PPM 1250 PPM

DISPOSITION SUMMARY

Animals Initially In Study	50	50	50	50
Early Deaths				
Moribund Sacrifice	5	3	5	2
Natural Death	1	3	1	3
Survivors				
Terminal Sacrifice	44	44	44	45
Animals Examined Microscopically	50	50	50	50

ALIMENTARY SYSTEM

Gallbladder	(45)	(49)	(49)	(49)
Cyst			1 [2.0]	
Intestine Small, Jejunum	(50)	(50)	(50)	(50)
Peyer's Patch, Hyperplasia, Lymphoid			1 [2.0]	
Liver	(50)	(50)	(50)	(50)
Basophilic Focus	4	2	5	
Clear Cell Focus	2	7	7	12
Eosinophilic Focus	5	8	11	10
Fatty Change			1 [4.0]	
Fibrosis			1 [2.0]	
Hematopoietic Cell Proliferation	2 [1.0]	1 [2.0]		
Infarct		2 [4.0]		1 [4.0]
Infiltration Cellular, Lymphoid	6 [1.2]	10 [1.3]		4 [1.0]
Inflammation, Chronic Active	33 [1.0]	47 [1.1]		42 [1.1]
Mixed Cell Focus	8	9		13
Tension Lipidosis	1	1		1
Bile Duct, Cyst		3		
Hepatocyte, Degeneration, Cystic			5 [1.2]	30 [1.9]
Hepatocyte, Multinucleated			47 [1.5]	48 [1.8]
Hepatocyte, Necrosis	1 [1.0]	6 [1.7]	8 [1.8]	8 [1.3]
Hepatocyte, Vacuolization Cytoplasmic	44 [1.0]	45 [1.4]	46 [1.8]	44 [1.4]
Hepatocyte, Centrilobular, Hypertrophy		44 [2.0]	50 [2.0]	48 [3.0]
Oval Cell, Hyperplasia			1 [2.0]	
Mesentery		(2)	(8)	(5)
Fat, Fibrosis		1 [3.0]	5 [2.4]	1 [3.0]
Fat, Inflammation, Chronic Active		1 [2.0]	5 [2.2]	2 [1.5]
Fat, Mineralization		1 [1.0]	3 [1.3]	
Fat, Necrosis		1 [4.0]	5 [4.0]	
Fat, Pigmentation		1 [3.0]		
Pancreas	(50)	(50)	(50)	(50)

a Number of animals examined microscopically at site and number of animals with lesion
 b Average severity grade (1-minimal;2-mild;3-moderate;4-marked)

NTP Experiment-Test: 88138-04
 Study Type: CHRONIC
 Route: DOSED FEED

INCIDENCE RATES OF NONNEOPLASTIC LESIONS BY ANATOMIC SITE (a)
 WITH AVERAGE SEVERITY GRADES^[b]
 BENZOPHENONE

Report: PEIRPT18
 Date: 06/24/03
 Time: 09:03:04

B6C3F1 MICE MALE

0 PPM 312 PPM 625 PPM 1250 PPM

ALIMENTARY SYSTEM - CONT

Cyst	1 [2.0]		1 [2.0]	2 [2.5]
Cytoplasmic Alteration	14 [1.0]	11 [1.0]	8 [1.1]	8 [1.0]
Infiltration Cellular, Lymphoid		1 [1.0]	1 [4.0]	1 [3.0]
Acinus, Atrophy	(50)	(50)	1 [2.0]	(50)
Acinus, Cytoplasmic Alteration			(50)	(50)
Salivary Glands				
Atrophy	31 [1.1]	1 [4.0]	40 [1.1]	28 [1.0]
Infiltration Cellular, Lymphoid	(50)	40 [1.0]	(50)	(50)
Stomach, Forestomach				
Hyperplasia	1 [3.0]	1 [3.0]	(50)	(50)
Inflammation, Chronic Active		2 [3.0]		
Epithelium, Cyst	1 [2.0]	1 [2.0]	1 [4.0]	1 [2.0]
Epithelium, Hyperkeratosis	1 [3.0]	2 [2.0]	1 [2.0]	1 [1.0]
Epithelium, Hyperplasia, Squamous	1 [4.0]	1 [3.0]		
Epithelium, Ulcer	(50)	(50)	(50)	(50)
Stomach, Glandular	7 [1.1]	13 [1.2]	18 [1.1]	5 [1.0]
Glands, Ectasia	(20)	(31)	1 [2.0]	1 [1.0]
Glands, Mineralization			3 [3.3]	(21)
Tooth			3 [3.0]	
Inflammation, Chronic Active	1 [3.0]	1 [3.0]	3 [4.0]	
Malformation	3 [3.0]	30 [1.8]	3 [4.0]	
Gingiva, Inflammation, Chronic Active	18 [1.7]		32 [1.6]	20 [1.8]

CARDIOVASCULAR SYSTEM

Heart	(50)	(50)	(50)	(50)
Hyperplasia, Atypical				1 [2.0]
Inflammation, Chronic Active	3 [1.0]	5 [1.2]	3 [2.7]	3 [1.3]
Mineralization	1 [1.0]			1 [1.0]

ENDOCRINE SYSTEM

Adrenal Cortex	(50)	(50)	(50)	(50)
Degeneration, Fatty				
Hyperplasia	7 [1.7]	10 [1.6]	2 [1.0]	6 [1.8]
Hypertrophy	26 [1.3]	22 [1.4]	24 [1.4]	18 [1.5]
Inflammation, Chronic Active			1 [1.0]	
Necrosis		1 [3.0]		
Subcapsular, Hyperplasia	50 [1.1]	46 [1.2]	46 [1.1]	47 [1.1]
Adrenal Medulla	(50)	(50)	(50)	(50)
Hyperplasia		1 [2.0]		

a Number of animals examined microscopically at site and number of animals with lesion
 b Average severity grade (1-minimal;2-mild;3-moderate;4-marked)

NTP Experiment - Test: 88138-04
 Study Type: CHRONIC
 Route: DOSED FBED

INCIDENCE RATES OF NONNEOPLASTIC LESIONS BY ANATOMIC SITE (a)
 WITH AVERAGE SEVERITY GRADES [b]
 BENZOPHENONE

Report: PEIRPT18
 Date: 06/24/03
 Time: 09:03:04

	0 PPM	312 PPM	625 PPM	1250 PPM
ENDOCRINE SYSTEM - CONT				
Islets, Pancreatic	(50)	(50)	(50)	(50)
Hyperplasia	1 [2.0]	1 [2.0]	(50)	(50)
Pituitary Gland	(48)	(49)	(50)	(50)
Pars Distalis, Cyst	7 [1.4]	5 [1.4]	5 [1.6]	4 [1.3]
Pars Distalis, Hyperplasia	1 [1.0]	1 [2.0]	1 [2.0]	
Pars Nervosa, Cyst		1 [2.0]		
Thyroid Gland	(50)	(50)	(50)	(50)
Infiltration Cellular, Lymphoid	2 [1.0]		1 [2.0]	1 [1.0]
Inflammation, Chronic Active	2 [2.5]			1 [2.0]
Follicle, Cyst	12 [1.1]	9 [1.0]	6 [1.0]	6 [1.3]
Follicle, Degeneration			1 [2.0]	1 [2.0]
Follicular Cell, Hyperplasia				
GENERAL BODY SYSTEM				
None				
GENITAL SYSTEM				
Epididymis	(50)	(50)	(50)	(50)
Degeneration		1 [4.0]		
Granuloma Sperm	1 [2.0]	2 [2.0]	2 [2.5]	1 [2.0]
Infiltration Cellular, Lymphoid	32 [1.1]	27 [1.0]	30 [1.1]	31 [1.0]
Mineralization			4 [1.5]	
Spermatocoele		1 [2.0]		
Preputial Gland	(50)	(50)	(50)	(50)
Inflammation, Chronic Active	21 [1.1]	23 [1.2]	25 [1.4]	32 [1.1]
Duct, Ectasia	20 [2.2]	15 [2.4]	15 [2.3]	28 [2.3]
Prostate	(50)	(50)	(50)	(50)
Infiltration Cellular, Lymphoid	32 [1.0]	43 [1.0]	46 [1.0]	28 [1.0]
Inflammation, Chronic Active	1 [1.0]			
Artery, Inflammation, Chronic Active	(50)	1 [4.0]	(50)	1 [3.0]
Seminal Vesicle	(50)	(50)	(50)	(50)
Artery, Inflammation, Chronic Active	1 [2.0]			
Testes	(50)	(50)	(50)	(50)
Mineralization				
Germinal Epithelium, Degeneration	1 [1.0]	1 [1.0]	4 [1.0]	12 [1.1]
Rete Testes, Cyst	3 [2.0]	3 [2.0]	1 [1.0]	2 [1.0]
	1 [3.0]	1 [3.0]		

a Number of animals examined microscopically at site and number of animals with lesion
 b Average severity grade (1-minimal; 2-mild; 3-moderate; 4-marked)

NTP Experiment-Test: 88138-04
 Study Type: CHRONIC
 Route: DOSED FEED

INCIDENCE RATES OF NONNEOPLASTIC LESIONS BY ANATOMIC SITE (a)
 WITH AVERAGE SEVERITY GRADES (b)
 BENZOPHENONE

Report: PEIRPT18
 Date: 06/24/03
 Time: 09:03:04

B6C3F1 MICE MALE 0 PPM 312 PPM 625 PPM 1250 PPM

HEMATOPOIETIC SYSTEM

Bone Marrow	(49)	(50)	(50)	(50)
Myeloid Cell, Hyperplasia			1 [4.0]	(50)
Lymph Node	(1)	(1)	(3)	(5)
Deep Cervical, Hyperplasia, Lymphoid		1 [3.0]	1 [2.0]	
Mediastinal, Hyperplasia, Lymphoid			1 [2.0]	
Mediastinal, Infiltration Cellular, Histiocyte	1 [3.0]			
Mediastinal, Inflammation, Granulomatous	(48)	(50)	(49)	1 [3.0]
Lymph Node, Mandibular	5 [3.2]	1 [2.0]	6 [2.2]	(47)
Hyperplasia, Lymphoid	(49)	(50)	(49)	5 [2.0]
Lymph Node, Mesenteric	2 [3.0]	2 [3.0]		(48)
Hyperplasia, Lymphoid	1 [2.0]			2 [3.0]
Infiltration Cellular, Histiocyte				
Inflammation, Granulomatous	(50)	(50)	(50)	1 [3.0]
Spleen				(50)
Angiectasis	11 [2.3]	7 [2.6]	1 [3.0]	14 [2.4]
Hematopoietic Cell Proliferation	17 [2.1]	31 [2.5]	9 [2.4]	32 [2.2]
Lymphoid Follicle, Hyperplasia, Lymphoid	(46)	(48)	6 [2.8]	(47)
Thymus	12 [2.3]	9 [2.8]	6 [2.8]	5 [3.4]
Atrophy	16 [1.6]	25 [1.4]	20 [1.5]	20 [1.3]
Cyst	2 [1.5]			
Ectopic Parathyroid Gland				
Ectopic Thyroid				
Infiltration Cellular, Histiocyte	1 [3.0]		1 [2.0]	

INTEGUMENTARY SYSTEM

Skin	(50)	(50)	(50)	(50)
Cyst Epithelial Inclusion				1
Inflammation, Granulomatous	1 [3.0]			
Mineralization				1 [1.0]

MUSCULOSKELETAL SYSTEM

None

NERVOUS SYSTEM

Spinal Cord	(1)	(1)	(1)	
-------------	-----	-----	-----	--

a Number of animals examined microscopically at site and number of animals with lesion
 b Average severity grade (1-minimal;2-mild;3-moderate;4-marked)

NTP Experiment-Test: 88138-04
 Study Type: CHRONIC
 Route: DOSED FEED

INCIDENCE RATES OF NONNEOPLASTIC LESIONS BY ANATOMIC SITE (a)
 WITH AVERAGE SEVERITY GRADES(b)
 BENZOPHENONE

Report: PEIRPT18
 Date: 06/24/03
 Time: 09:03:04

B6C3F1 MICE MALE

0 PPM

312 PPM

625 PPM

1250 PPM

NERVOUS SYSTEM - CONT
 Degeneration

1 [3.0]

RESPIRATORY SYSTEM

Lung	(50)	(50)	(50)	(50)
Infiltration Cellular, Lymphoid	32 [1.1]	38 [1.1]	47 [1.1]	36 [1.0]
Inflammation, Chronic Active	1 [3.0]	2 [1.5]	1 [1.0]	1 [1.0]
Metaplasia, Osseous			1 [1.0]	
Necrosis	1 [3.0]			
Thrombosis		1 [2.0]		
Alveolar Epithelium, Hyperplasia	6 [1.7]	7 [2.6]	8 [1.9]	4 [3.3]
Alveolus, Infiltration Cellular, Histocyte	7 [2.4]	1 [2.0]	1 [2.0]	3 [1.7]
Mediastinum, Inflammation, Suppurative			1 [3.0]	
Nose	(50)	(50)	(50)	(50)
Inflammation, Chronic Active	2 [2.5]		1 [1.0]	2 [1.0]
Inflammation, Focal, Suppurative			1 [2.0]	1 [1.0]
Inflammation, Suppurative				
Nasolacrimal Duct, Inflammation, Chronic Active			2 [2.5]	1 [1.0]
Olfactory Epithelium, Degeneration	1 [3.0]	2 [1.0]	2 [1.0]	24 [1.2]
Olfactory Epithelium, Glands, Metaplasia				

SPECIAL SENSES SYSTEM

Eye	(50)	(50)	(50)	(50)
Inflammation, Suppurative			1 [3.0]	
Anterior Chamber, Iris, Inflammation, Suppurative		1 [4.0]	2 [1.5]	1 [2.0]
Cornea, Inflammation, Chronic Active	(50)	(50)	(50)	(50)
Harderian Gland			3 [3.0]	2 [3.5]
Hyperplasia	2 [1.5]	3 [3.0]	3 [2.7]	2 [1.0]
Infiltration Cellular, Lymphoid	37 [1.0]	33 [1.0]	24 [1.0]	29 [1.0]
Inflammation, Chronic Active	1 [1.0]		1 [1.0]	
Mineralization				1 [1.0]

URINARY SYSTEM

Kidney	(50)	(50)	(50)	(50)
Infarct	1 [2.0]	1 [3.0]	1 [4.0]	4 [2.0]
Infiltration Cellular, Lymphoid	44 [1.1]	44 [1.1]	45 [1.0]	45 [1.3]

a Number of animals examined microscopically at site and number of animals with lesion
 b Average severity grade (1-minimal;2-mild;3-moderate;4-marked)

NTP Experiment-Test: 88138-04
 Study Type: CHRONIC
 Route: DOSED FEED

INCIDENCE RATES OF NONNEOPLASTIC LESIONS BY ANATOMIC SITE (a)
 WITH AVERAGE SEVERITY GRADES (b)
 BENZOPHENONE

Report: PEIRPT18
 Date: 06/24/03
 Time: 09:03:04

	0 PPM	312 PPM	625 PPM	1250 PPM
URINARY SYSTEM - CONT				
Inflammation, Chronic Active	4 [1.0]	1 [1.0]	2 [2.0]	8 [1.4]
Metaplasia, Osseous	49 [1.0]	2 [1.5]	1 [1.0]	50 [1.0]
Mineralization		50 [1.0]	50 [1.0]	50 [1.0]
Necrosis	49 [1.2]	48 [1.4]	1 [1.0]	50 [3.0]
Nephropathy	1 [2.0]	1 [2.0]	50 [1.7]	
Artery, Inflammation, Chronic Active	4	8	12	22
Cortex, Cyst	(50)	(50)	(50)	1 [3.0]
Renal Tubule, Pigmentation	24 [1.0]	24 [1.0]	32 [1.0]	(50)
Urinary Bladder				23 [1.0]
Infiltration Cellular, Lymphoid				

a Number of animals examined microscopically at site and number of animals with lesion
 b Average severity grade (1-minimal;2-mild;3-moderate;4-marked)

